MODERN PACKAGING

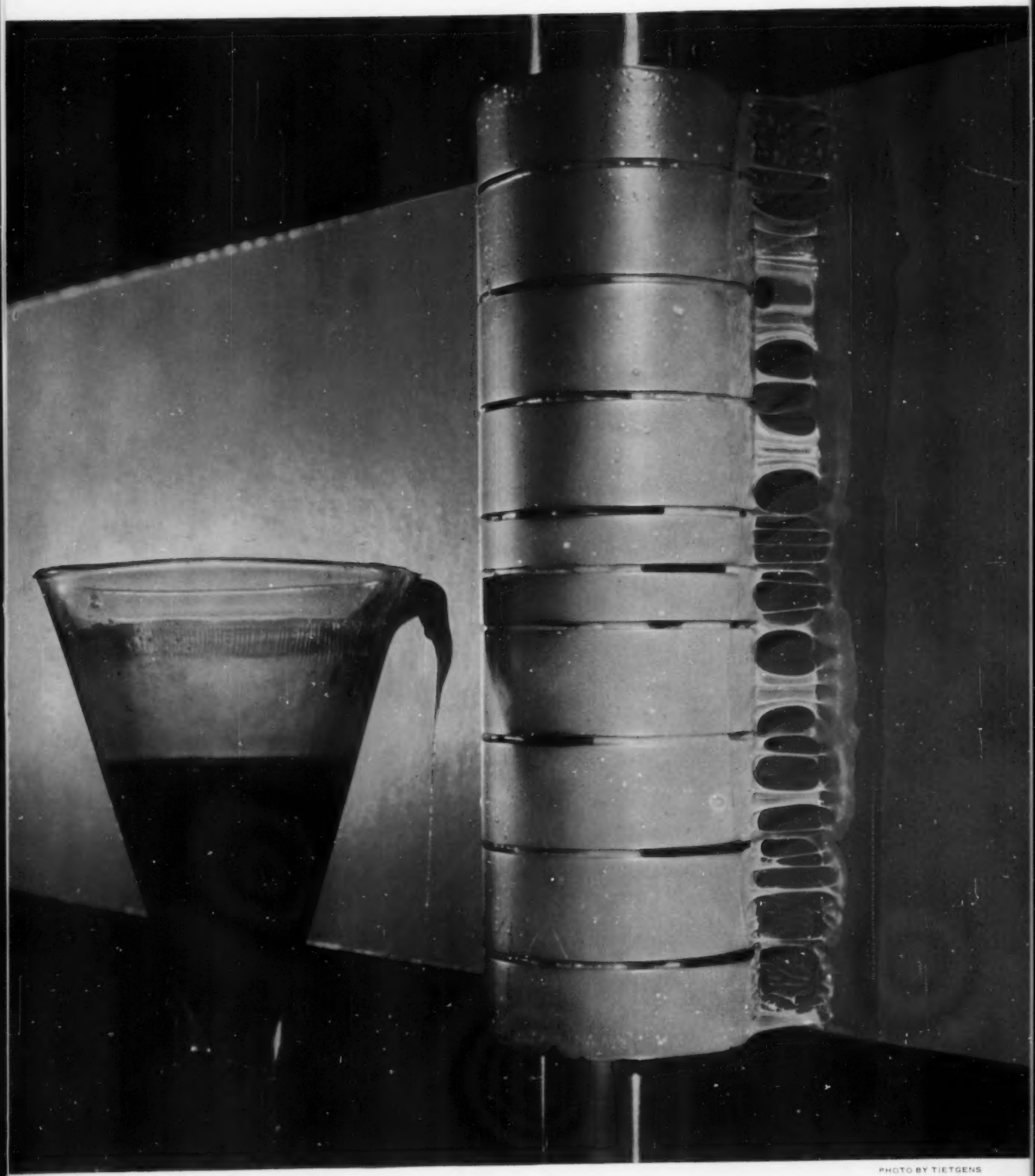

PHOTO BY TIETGENS

Adhesives: key to package performance | **June 1958**

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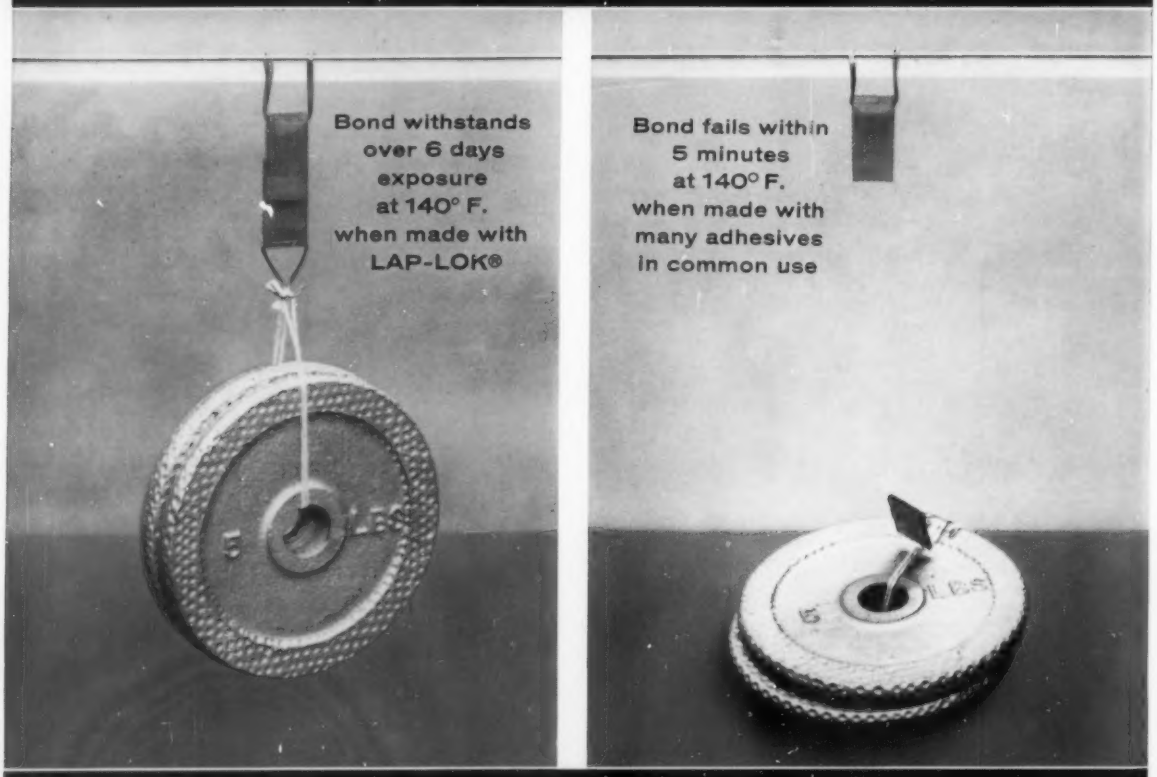
with glued laps...


Bond withstands over 6 days exposure at 140° F. when made with LAP-LOK®
Bond fails within 5 minutes at 140° F. when made with many adhesives in common use

will your cases stand summer boxcar heat?

LAP-LOK, National's resin lap-glue, safely withstands blistering summer temperatures in boxcars and warehouses. For example, look at the above test: Two 1" strips of corrugated board bonded with LAP-LOK withstand 10 lbs. pull at 140°F. indefinitely. Compare this with the product you are now using.

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NATIONAL STARCH PRODUCTS INC.

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- Seal moisture in, or out
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You're always ahead with Alcoa . . . greatest name in aluminum

MODERN PACKAGING®

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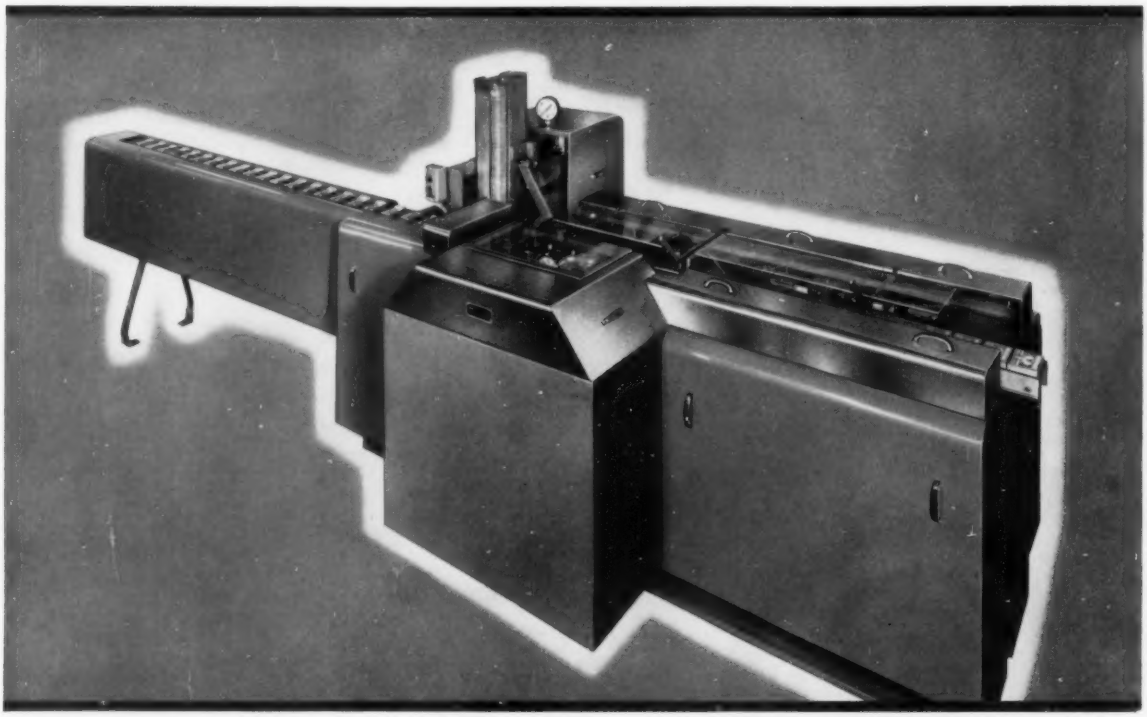

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MODERN PACKAGING®

Economy or profit?

This year, said a veteran advertising man recently, "is going down in economic history as either the year of the scorekeeper or the year of the player." Scorekeepers, he explained, are "the efficiency experts, financial geniuses, treasurers and controllers who are now having their heyday. They are busy setting up what they consider 'realistic' quotas, cutting selling budgets, reducing advertising expenditures and in general scaring everybody to death."

To this picturesque comment, the speaker (advertiser-agencyman Philip J. Kelly) added this observation: "Never have I known of a company that has been able to economize its way into a profit."

To men responsible for packaging, this thought should be a serious reminder. At the moment, their critical problem and that of their suppliers is to hold the line on packaging which, with the other essential components of marketing, must continue to move goods and so guarantee economic stability and profit levels.

Fortunately, packagers today have on their side an array of new as well as proved packaging materials and equipment never rivaled in the past, a constant supply designed for an expanding market.

With these sales-making tools available, and in the face of tighter competition for the consumer dollar, 1958 is no time to slash packaging budgets . . . to degrade packaging . . . to give away sales to less-panicky competitors. Even a small cut in packaging costs "for economy's sake" may invite such disastrous effects as resultant product damage, low sales, a high rate of returns and diminished re-orders.

To packaging suppliers, these blanket economies pose a dual challenge. For the long run, their own self-interest and the good of both the packaging field and the general economy demand a customer sales and service job far better than that needed in normal competition. For the short run, suppliers must be ready to fill the orders for new packaging supplies and equipment that are bound to come as industry rebuilds its low inventories to keep pace with the amazingly stable rate of retail sales.

Both jobs call for smart selling of quality, performance, value, availability and service to make packagers order equipment and materials now, before prices inevitably rise again. Through such compelling and constructive salesmanship, the packaging field can be protected against the penalties that "scorekeepers" may inflict in the name of profit protection.

The Editors

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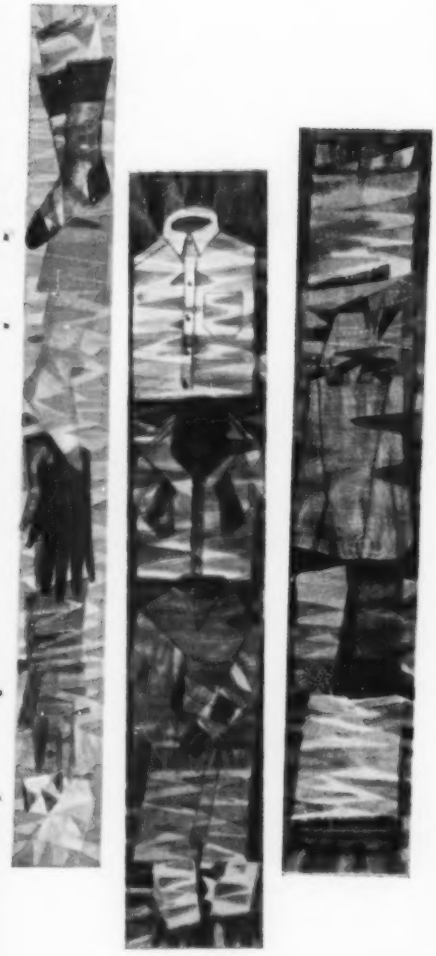
The sparkling transparency and snug fit of Dobeckmun's "Ultrakleer" polyethylene is an important part of the marketing program for Pepperell's quality linens. Coupled with a sharpness of printing, Dobeckmun's polyethylene packages help make Pepperell "The brand women believe in."

Packages for performance...



Dobeckmun polyethylene packaging offers new sales opportunities to the textile industry. Its application to textile products is unlimited. From women's sweaters and slips, men's stockings and shirts, to household's many white goods . . . Dobeckmun polyethylene helps sell them all on sight.

The reason is clear: a high transparency that presents textile products at their best; that gives the brand name added impact; the printed message greater appeal.

Dobeckmun makes a variety of polyethylene bag constructions to complement most textile products. Above all, Dobeckmun polyethylene is specially made to conform to high-speed packaging machinery . . . assuring top quality packaging performance every time.

Whatever the style of textile . . . from selection to point of sale . . . your product is packaged for performance by The Dobeckmun Company,

A Division of The Dow Chemical Company, Cleveland 1, Ohio. Berkeley 10, California • Offices in most principal cities.

Cut Your Package Development Costs with this Revolutionary

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If you are not completely satisfied with the performance of "Test-Vac" 81 after using it 10 days, return the unit to us and we will refund your payment in full.

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If you're doing development work in blister, contour and skin-formed packaging . . . or if you're designing 3-D letters and signs, formed displays, toys, novelties or housewares . . . then the "Test-Vac" 81 is made-to-order for you!

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PLANTS
FROM COAST
TO COAST

New idea in catsup packaging

This square bottle—unique in catsup merchandising—offers fine label display and takes 21% less space on the shelf.

The success of the square shape in other items in the line led to this Armstrong catsup design. Like the others, it shows more of the product, makes the label easier to read, and saves shelf space both in the store and in the refrigerator. Why not talk with your Armstrong man about your next package? Armstrong Cork Co., Lancaster, Pa.

Armstrong PACKAGING

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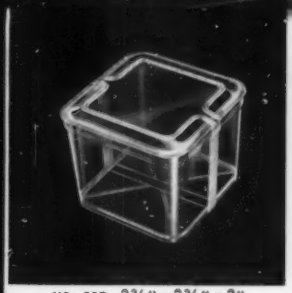

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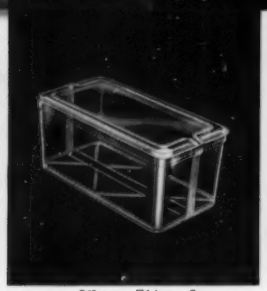

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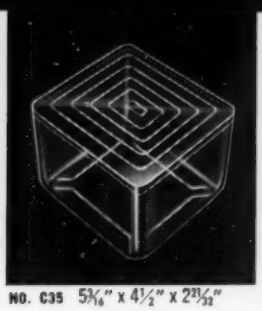

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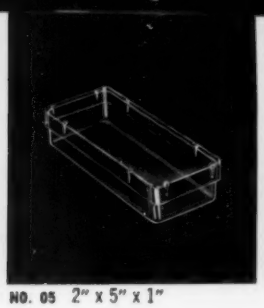

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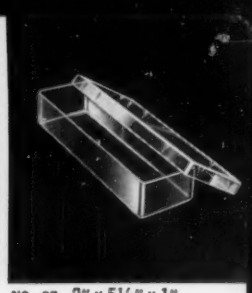
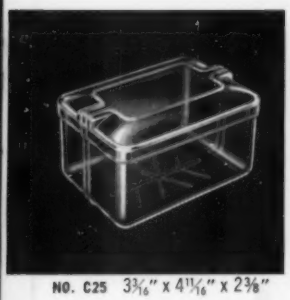
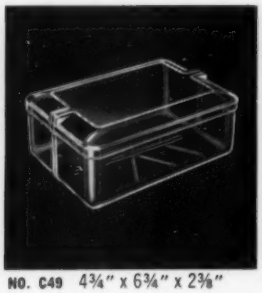


NO. 07 2" x 5½" x 1"

looking for a square or oblong box?



NO. C25 3⅜" x 4¹¹⁄₁₆" x 2⅜"



NO. C49 4¾" x 6¾" x 2⅜"

NO. C79 5¼" x 7⅜" x 3¾"

NO. 195F 7⅞" x 10⅜" x 3¾"

NO. 395F 10¾" x 12⅜" x 3⅞"

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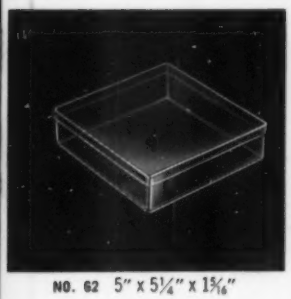
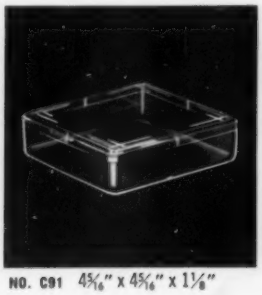
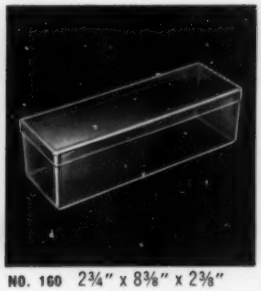


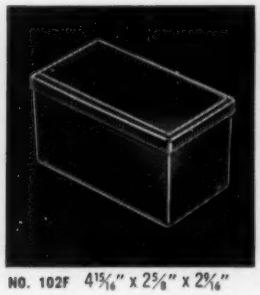
NO. 62 5" x 5¼" x 1⅝"



NO. C91 4⅝" x 4⅝" x 1⅛"



NO. 160 2¾" x 8⅜" x 2⅜"



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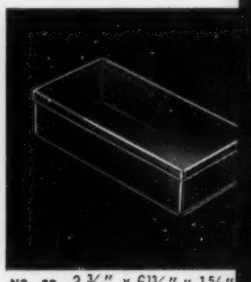
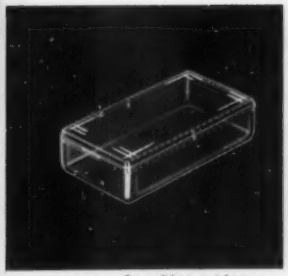
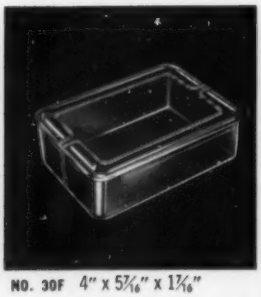


NO. 82 3 3⁄16" x 6¹³⁄₁₆" x 1⅝"

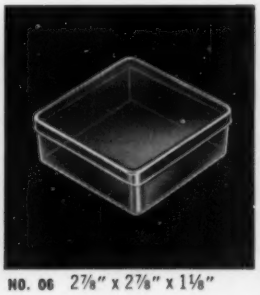
Rigid Plastic Boxes... all shapes and sizes



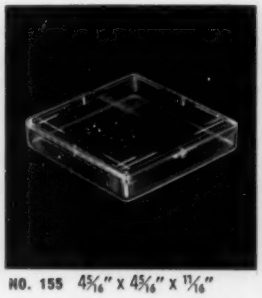
NO. 150 3" x 5¾" x 1³⁄₁₆"



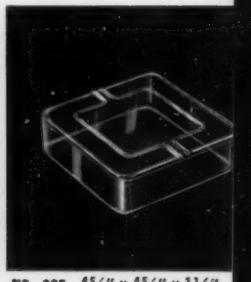
NO. 30F 4" x 5⅞" x 1⅞"



NO. 06 2⅞" x 2⅞" x 1⅛"



NO. 155 4⅝" x 4⅝" x ¹¹⁄₁₆"



NO. 92F 4⅝" x 4⅝" x 1⅛"

TRI-STATE PLASTIC MOLDING CO. HENDERSON 6, KY.

Chicago: 209 S. State Street • HArrison 7-3630

NOTE: *All dimensions are inside measurements*

KEEPS THAT GOT-TO-BE GOODNESS

Better, Longer, at Amazing Low Cost!

CLO-CAN*...Fresh Idea in REYNOLDS WRAP ALUMINUM PACKAGING

CLO-CAN is a development of Reynolds Research which early attracted Borden's interest as a cottage cheese container. Reynolds and Borden's cooperated in adapting the package to Borden's requirements and it is now demonstrating its advantages in an increasing number of test patterns.

CLO-CAN's superior protection makes possible *wider distribution*...shipping to greater distances from dairy source. Its rectangular shape saves space in retail cabinets and offers maximum area for label display. Finally, housewives like it—as interviews prove. They like both the easy-opening, easy-storing package and its fresher contents.

Reynolds CLO-CAN consists of an aluminum foil lined chipboard container in an eye-appealing, gravure-printed aluminum foil overwrap. Both inner liner and overwrap are heat-sealed...providing extraordinary protection against moisture, air, gases, odors, grease and light. Opens by slitting with knife along indicated lines. Makes neat container for table service. Re-closes easily for refrigerator storage.

Cost is amazingly low...approximately half as much as tin cans or metal-end fibre containers...less, even, than usual cottage cheese "tubs". Ideal also for frozen fruits, frozen prepared foods, puddings, meat specialties, etc., etc.
For information on CLO-CAN, on the Reynolds Wrap Aluminum Packaging Seal, on all that aluminum can do for protection and eye-appeal...call the nearest Reynolds Sales Office. Or write to **Reynolds Metals Company,** Richmond 18, Va.

*T. M. of R. M. C., Patent Pending.

REYNOLDS ALUMINUM

Watch Reynolds All-Family Television Program "DISNEYLAND", ABC-TV.

Borden's
PASTEURIZED
COUNTRY STYLE
(Small Curd)
CREAMED
COTTAGE CHEESE
ONE POUND NET WEIGHT
MADE BY THE BORDEN COMPANY, NEW YORK 17, N. Y.
Borden's CREAMED COUNTRY STYLE COTTAGE CHEESE
QUALITY PROTECTED WITH REYNOLDS WRAP ALUMINUM PACKAGING
Consumers acclaim the new CLO-CAN... and the Seal that identifies REYNOLDS WRAP ALUMINUM PACKAGING. (8 out of 10 women know it, surveys show; 7 out of 10 of these prefer products carrying it!)

Packaging
Protection for

SEASON-TO-SEASON SHELF LIFE

Surely, in June, Christmas is far from the consumer's mind.

But it's different with the famous Dennison Manufacturing Company of Framingham, Massachusetts—one of the world's leaders in the manufacture of Christmas tags and stickers.

And Dennison knows its outlets will have some carry-over stocks come close of business on Christmas Eve—inevitable if proper inventories are to be maintained.

But Dennison dealers—unlike many—do not have to resign themselves to losses incurred by broken packages and the soiled sales appeal frequently encountered in the holdover of such seasonal items.

You see: All Christmas seals and tags by Dennison are packaged in VITAFILM—the outstanding Goodyear transparent film which has the kind of "stay-fresh" stamina it takes to carry goods *all the way* from factory to ultimate sale.

Why so good? VITAFILM seals to a positive welded seam which won't fail the product it protects. And VITAFILM withstands temperature changes, customer handling and other hazards which cause many packages to shatter, split and run.

Beyond all this, VITAFILM presents no affinity to dust. It remains crystal clear, a clear-cut case of sales appeal.

Wouldn't your product gain from such preferred treatment? The cost is rock-bottom, and the reasons for using no other film but VITAFILM are sheer solid fact. Write: Goodyear, Packaging Films Dept. R-6418. Akron 16, Ohio.

Vitafilm BY GOODYEAR

The best thing you can place between you and your customer!

Vitafilm, a Polyvinyl chloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

Packaging showmanship

show it in
STYRON
and sell it!

Still sending your product to market in old-fashioned cover-up packages? Then it's time to give it the fresh visual appeal today's merchandising demands . . . in sparkling, clear plastic containers made of Styron®.

Here is rigid packaging that has not only increased sales but *sustained* those increases for hundreds of products. Styron plastic containers back up their visual appeal with complete product protection.

Let Dow Packaging Service help you choose from hundreds of shapes and sizes . . . opaque, crystal clear or in eye-catching colors . . . imprinted or ready for your label. Or we'll help you meet your specific needs. Write today.

The Dow Chemical Company does not fabricate finished packages but rather is a supplier of raw material to leading manufacturers.

FROM AMERICA'S FIRST FAMILY OF PACKAGING MATERIALS . . .

pays off here

show it in
SARAN WRAP
and sell it!

You don't have to hide your product to protect it! Crystal-clear Saran Wrap* turns any product into its own best sales force . . . and protects it, too.

Saran Wrap is the greatest moisture barrier of all clear packaging films. It's soft, pliable, completely transparent . . . and it won't cloud up or become brittle with age. In the household roll, it has become America's first name for real food protection.

Dow Packaging Service is ready to help you put your product in the sales limelight with Saran Wrap. Write today to THE DOW CHEMICAL COMPANY, Midland, Michigan, Plastics Packaging Service 1732A.

*Trademark of The Dow Chemical Company

YOU CAN DEPEND ON DOW

From pine... to pulp...
to paper... to people...
through KVP

"Protecting America's food is our business. We manage 3,400,000 acres of forest, and we select only the most suitable trees to make into protective papers. Some call us 'Tree Farmers'—we grow more trees than we use. So there will always be KVP paper for the future."

Next best thing to a taste of your product...

a true to life illustration on a KVP Overwrap

So temptingly can your food product be portrayed on a KVP Overwrap, that except for handing out actual samples, nothing else is quite so effective at point of sale.

A KVP Overwrap is superior to any other kind of wrapping because your product can be pictured with taste tempting, hard selling realism. The pure white, hard waxed surface of the KVP Overwrap is a superbly printable background. On it, our printers achieve a gravure or letterpress facsimile of your product with amazing clarity, depth and color.

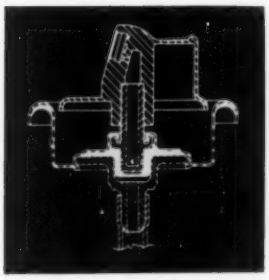
Compared to an ordinary printed carton, KVP Overwraps give you surprising economy along with far better printability.

Another important plus is that KVP Overwraps will perform on your present packaging machinery at top efficiency.

Our packaging engineers have worked with most of America's foremost brand names. In case after case, greater efficiency, economy and self-selling ability began with the switch to KVP Overwraps. We earnestly believe the eye appeal of a KVP Overwrap is matched only by its ability to guard food freshness.

Write us for full information and samples.

THE KVP COMPANY KVP KALAMAZOO, MICHIGAN



The First Successful Aerosol Wax uses . . .

RISDON

Micro-Mist* Valves

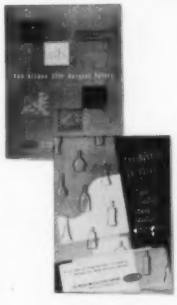
Johnson's new "PLEDGE" is a shining example of the dispensing ability of the Risdon Micro-Mist valve. As housewives are delightedly discovering, a gentle push on the actuator sends out a wide, soft cloud of emulsified wax which evenly coats the surface. A light wiping produces a high shine.

This Johnson formulation requires a three-phase dispensing system. The Micro-Mist valve (a Risdon 5210 valve topped with the patented Micro-Mist actuator) plays a vital part in this system. It mechanically breaks the solid stream of liquid into a fine, atomized mist as it leaves the spray orifice.

For 2-phase aerosols this valve is supplied either with standard actuators or with Micro-Mist actuators when a super-fine, wider, drier spray is desired. In fact, this basic Risdon valve has proven ideal for almost the entire range of aerosols including water-base formulations and ultra-low pressure products. It is being used in metal, glass and plastic containers for vertical and horizontal sprays and for foam dispensing.

THE RISDON MANUFACTURING COMPANY
Valve Division, Naugatuck, Conn.

There's a Risdon Valve for Virtually Any Pressurized Product Packaged in Glass, Metal or Plastic.



SEND FOR THESE FREE BOOKLETS—

They give you complete illustrated information on Risdon valves and actuators for metal, glass and plastic packaged aerosols.

*Patented

RI-108

NEW MACHINERY PROGRAM PAYS OFF

AT AMERICAN BEVERAGE

"Our Standard-Knapp Case Packing Equipment gives us greater efficiency and will quickly pay for itself," says Mr. Otto Wolf, plant superintendent of American Beverage Company, Brooklyn, N. Y. The advantages which impress Mr. Wolf are:

On same unit he can run 10 oz., 12 oz., 16 oz., or 29 oz. bottles — change from partitioned to carrier carton cases — with only minor adjustments.

Case feed and case packing are precisely synchronized, assuring consistently dependable operation.

If you want *your* new machinery program to pay off, specify Standard-Knapp Bottle Packers, Case Feeds and Labelers. Here is the assurance you want of proven performance — of equipment produced to meet your packaging requirements.

Mr. Otto Wolf, plant superintendent, observes case packing operation on Standard-Knapp unit.

FOR DESCRIPTIVE LITERATURE, PLEASE WRITE

EMHART
MANUFACTURING COMPANY
STANDARD-KNAPP DIVISION
PORTLAND, CONNECTICUT

Did you say 7 cents?

That's right! Just a shade over 7¢ for the all new 16-OUNCE PLASTIC CONTAINER by PLAX.

Tough, feather-light, colorful and gentle to touch, the low-cost PLAX•PAK® containers herald a new age for plastics—and new profits for you!

Over 10 years ago Plax pioneered the "squeeze-bottle" features of the earlier polyethylenes. Now, after several years of intensive research, creative engineers and chemists at Plax have harnessed the new HIGH DENSITIES.

With this breakthrough, the "fill-and-pour" concept for plastics becomes a reality . . . containers designed to function as "carrier" packages will now compete in the market place with glass bottles and metal cans.

The PLAX•PAK Line is now available from stock for high-volume mass-market selling. A complete range of other sizes to be available soon . . . ideal for household liquids, cosmetics, chemicals . . . and a wide range of consumer products!

SAVE

- weight
- cubage
- freight
- breakage
- carton costs
- handling costs
- warehouse space

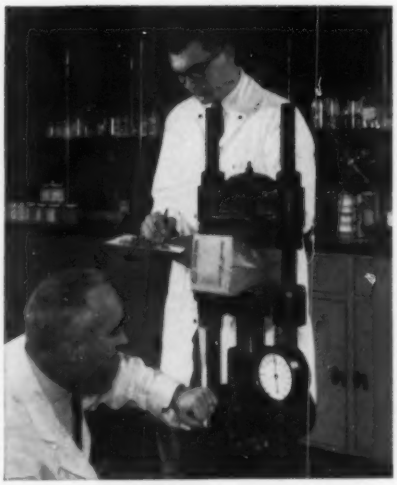
PLAX CORPORATION

P. O. BOX 1019 • Hartford, Connecticut

In Canada, Plax Canada Limited, Toronto, Montreal

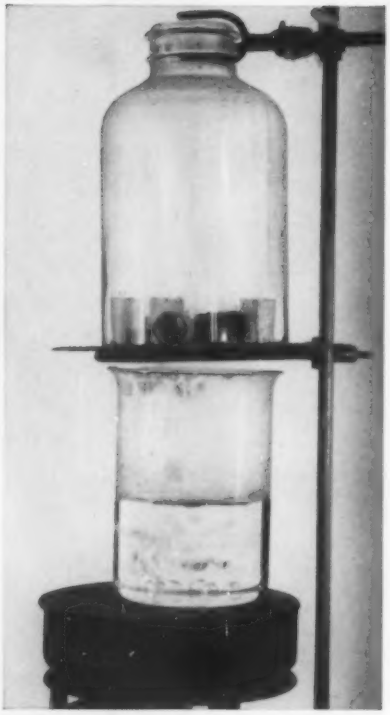
REGIONAL OFFICES | 500 Fifth Avenue, New York 36, N. Y.
911 Busse Highway, Park Ridge, Ill.

Price in carload quantities F.O.B. mfg. plant is for natural high-density polyethylene—slightly more for standard colors and printing. Cap extra.



210-pound squeeze! Seban AR-2—case-sealing adhesive—withstands extreme pressure. Compression test proves Seban can take almost any amount of palletizing—more than 200 pounds—and still hold, even when the case breaks down. Choose Seban when great bonding strength is important.

Seban will pass your toughest sealing test



36 minutes in live steam! Seban AR-5—tube-winding adhesive—resists both heat and moisture in sterilization of paper tubes for surgical products above. Steam pours into bell jar without delaminating tubes sealed with Seban—not even after 36 minutes. Choose Seban for great resistance to heat and moisture.

In test after test, Seban proves itself capable of meeting almost every packaging situation. Now this new line of polyvinyl resin packaging adhesives from Armour is ready to help you solve your toughest package-sealing problems.

Seban has been proved superior for CARTONS—WINDOW BOXES—CASES—FOLDING CARTONS—TUBES—BAGS—and others. In every instance Seban helps get increased production and better sealing results.

We urge you to have your own laboratory test Seban. Why take chances on an ordinary adhesive doing an ordinary sealing job when Seban has been proved superior?

If you use one of the following machines, a special grade of Seban will help you utilize your equipment to the fullest efficiency.

ABC
Dacam
Dacamatic
Elliott
Ferguson
Gar-Pak
Globe
Hayssen
International
Jones
Master
Monitor
Mor-Can-Pak
New Jersey
Peters
Pneumatic Scale
Post
Potdevin
Rockwell
Scandia
Standard-Knapp
Staude

ARMOUR ADHESIVE DIVISION

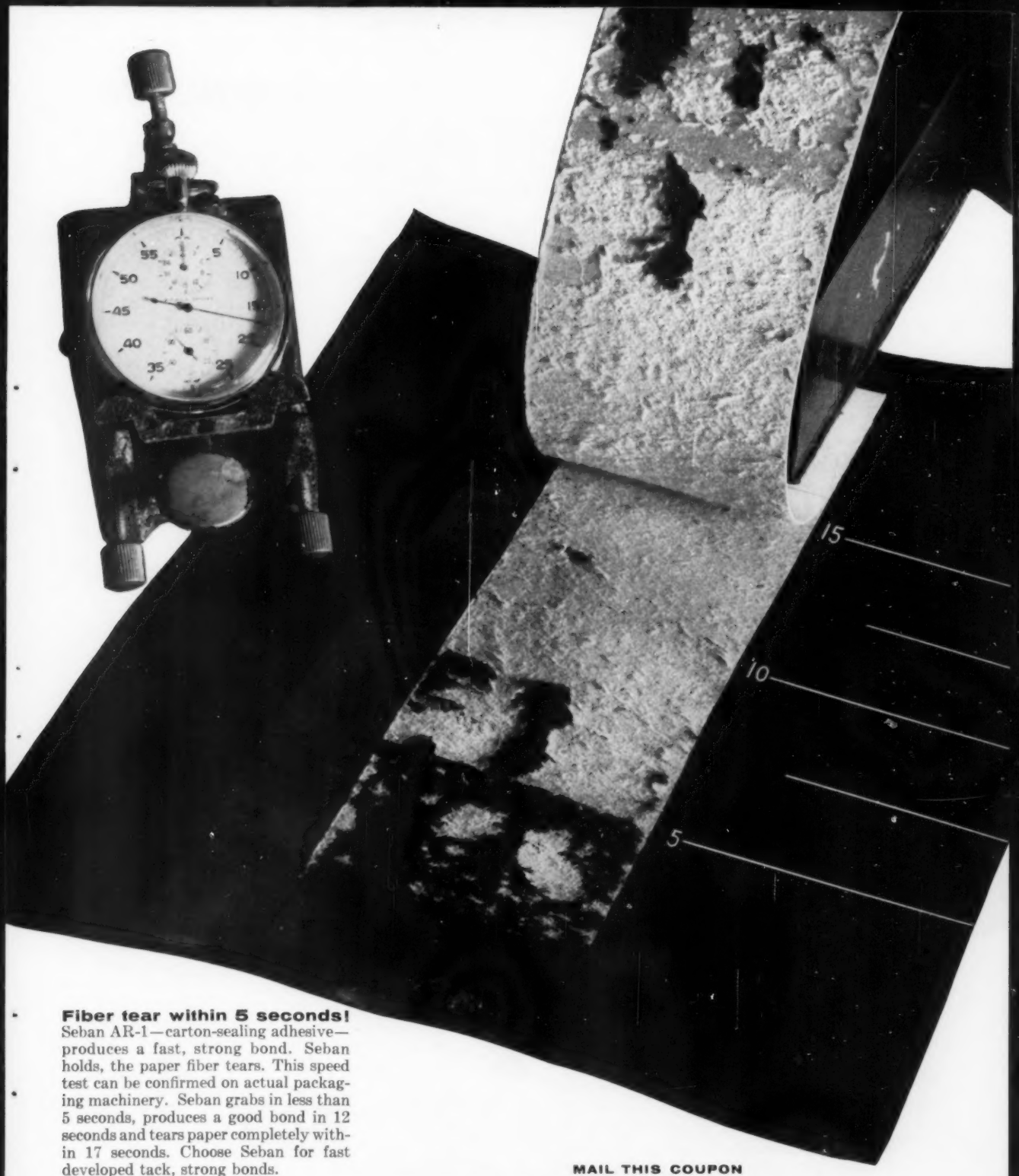
Armour and Company, 1355 W. 31st Street, Chicago 9, Ill.

120 Broadway
New York 5, N. Y.

Delaware and Spring Garden Streets
Philadelphia 23, Pennsylvania

Meta Lane
Lodi, New Jersey

235 South Hamilton Street
High Point, North Carolina



Fiber tear within 5 seconds!
Seban AR-1—carton-sealing adhesive—produces a fast, strong bond. Seban holds, the paper fiber tears. This speed test can be confirmed on actual packaging machinery. Seban grabs in less than 5 seconds, produces a good bond in 12 seconds and tears paper completely within 17 seconds. Choose Seban for fast developed tack, strong bonds.

MAIL THIS COUPON

Armour Adhesive Division
1355 West 31st Street • Chicago 9, Illinois

NAME_____

POSITION_____

FIRM_____

CITY_____ STATE_____

SEAL WITH SEBAN FOR SUPERIOR SEALING!

Please send me: MP-6-58

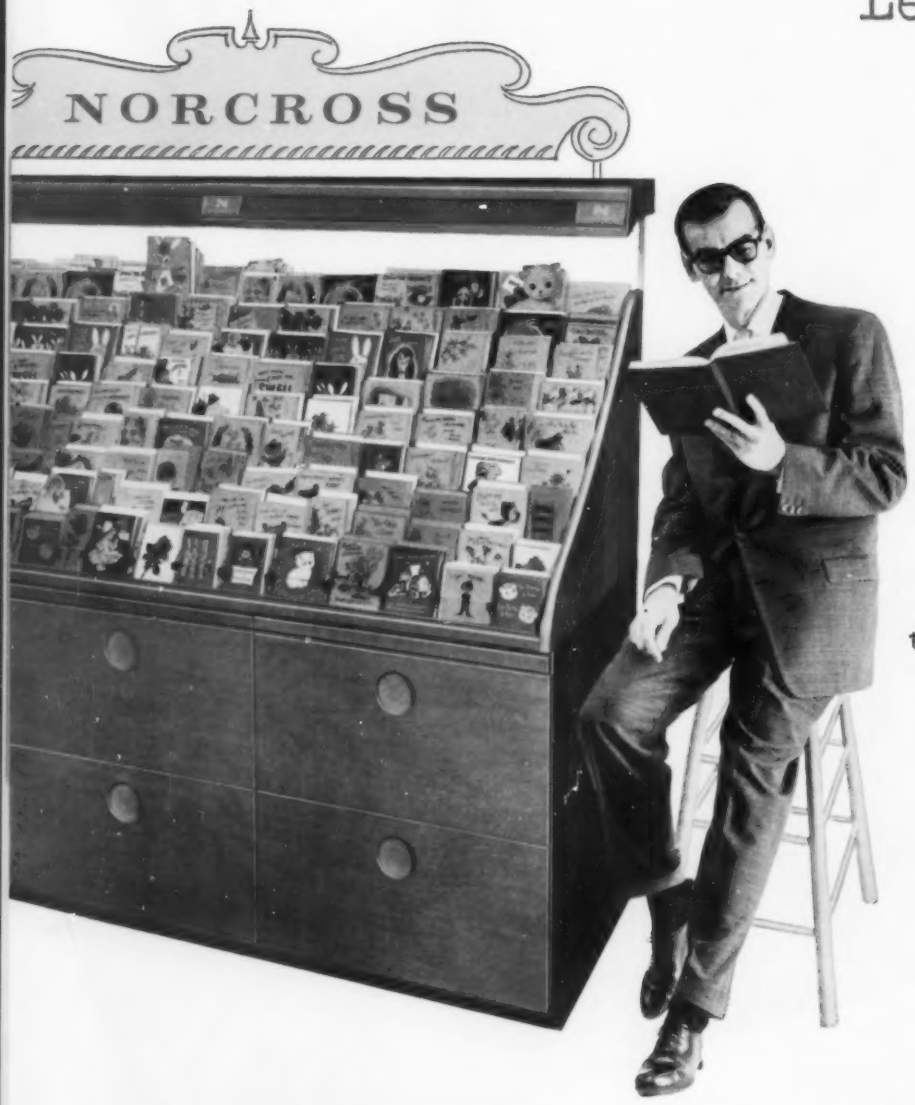
- ☐ New Seban literature
- ☐ A 5 gal. sample at your quantity price. Our volume is_____.

Our application is:

- ☐ Carton sealing
- ☐ Folding cartons
- ☐ Case sealing
- ☐ Tube winding
- ☐ Window boxes
- ☐ Bag sealing

"How do we love acetate?

Let me count the ways...



...as film for windows
in greeting cards,
sleeves for gift wraps,
backing for ribbons
...as sheeting for
transparent box covers,
gift boxes, even
as our display's
lighting cove."

Norcross and acetate have worked together for a good many Christmases, Birthdays, and Anniversaries. This partnership has produced many sparkling ideas in the design and packaging of greeting cards and gift wrapping materials. Probably one reason for this is the fabricating versatility offered by Celanese acetate. There are so many effective ways manufacturers can employ acetate's sparkling transparency, toughness, and long life. Personal assistance, to help you apply Celanese acetate film and sheeting to your product or packaging, is available upon request. Celanese®

acetate... Celanese packaging films and sheeting

Celanese Corporation of America, Plastics Division, Dept. 108-F, 744 Broad Street, Newark 2, N. J.
Canadian Affiliate: Canadian Chemical Company, Limited, Montreal, Toronto, Vancouver.
Export Sales: Amcel Co., Inc., and Pan Amcel Co., Inc., 180 Madison Avenue, New York 16, N. Y.

Sold – and Still Selling

This Mullinix package "billboards" Morrell Pride bacon at the point of sale. The unique "Peek-A-Boo®" flap protects bacon from damaging light rays and keeps it looking fresher . . . better.

But, this package keeps right on selling in the home. It takes up less space in the refrigerator and is easy to open and re-close without mess. The bacon is protected at all times and . . . because of this, the last slice tastes as good and fresh as the first.

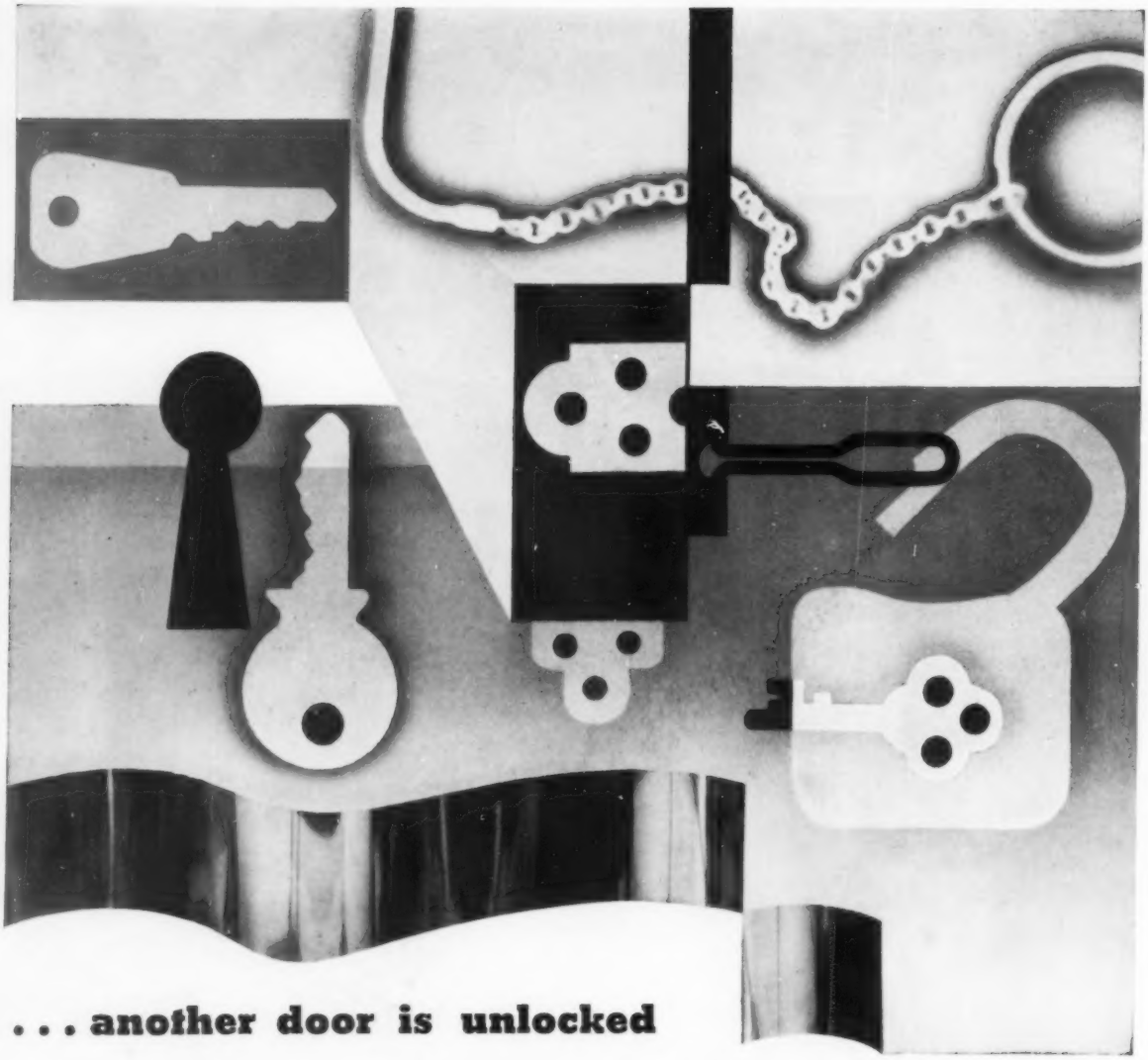
Increased Sales . . . by Design!

The patented Mullinix package is another Western-Waxide flexible packaging development. Our packaging research laboratories, combined with excellent graphic arts facilities can develop, create and produce a package that will *sell and keep right on selling* for you.

CROWN ZELLERBACH **WESTERN-WAXIDE DIVISION**

Headquarters Office: 2101 Williams St., San Leandro, Calif. • Plants and Sales Service Offices in Principal Cities of the United States

Manufacturers and converters of plain and printed waxed paper • foil • foil laminates • polyethylene coated paper and poly-film laminates • films • bags • pouches and other specialized flexible packaging materials



. . . another door is unlocked

Your enquiry may lead to research, research to new knowledge, opening the door to revolutionary uses for aluminium foil—new inks, new coatings, new laminating techniques.

Every experiment cuts a new key to fit old and new locks. We have collected quite a bunch—perhaps we can open the door for you.

Star Foil is backed by the most modern equipment—Technical and Laboratory services are handled by men with 25 years experience of research on foil, coatings, inks and laminates.

This equipment and experience is at your service.

Star Foil

from EUROPE'S MOST MODERN FOIL MILLS Condenser Foil from ·0045 mm. Thick. Widths Up To 40½"

STAR ALUMINIUM COMPANY LIMITED
WOLVERHAMPTON & BRIDGNORTH, ENGLAND.

AGENTS: NORCA CORPORATION, EMPIRE STATE BUILDING, 350 FIFTH AVENUE, NEW YORK 1, N.Y.
CABLE NORCACORPO, NEW YORK • TELEPHONE LONGACRE 4-7225-6-7-8-9

FOR PRESSURE CANS

WITH AN UNRIVALED

SALES RECORD...

FOLLOW THE LEADERS TO CANCO

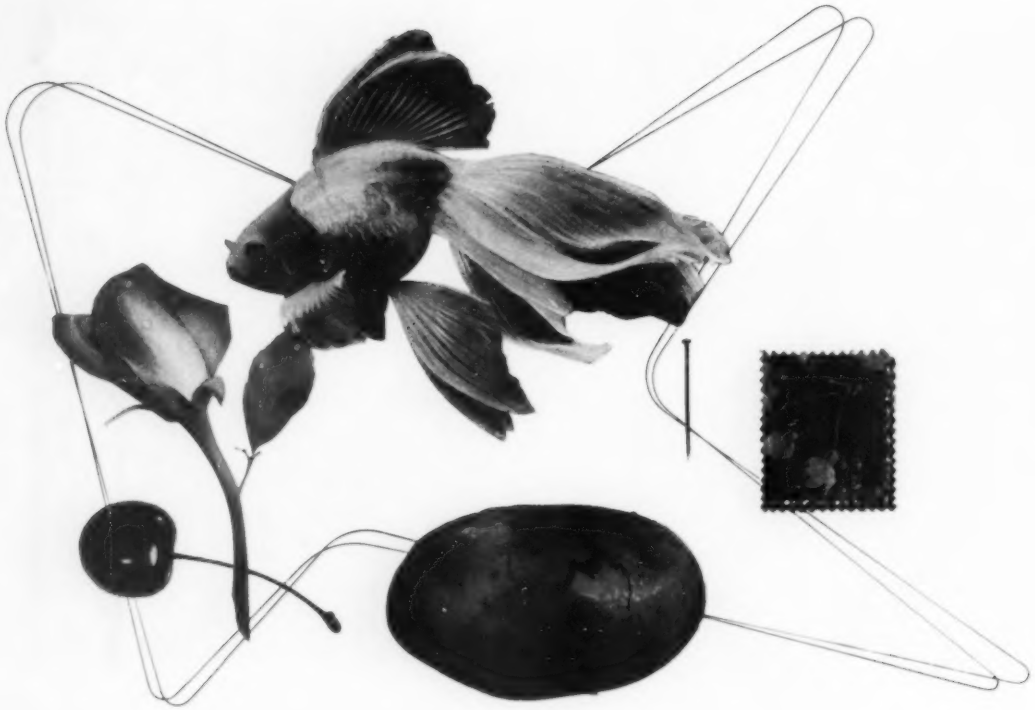
More shaving lather is sold in Canco pressure cans than in all other makes combined. Naturally, there are good reasons for this success!

Canco makes a full line of *guaranteed* pressure cans, in seven sizes—with standard one-inch cup openings or individually styled tops. To give you a round-the-can label design, Canco has developed the first commercial coated side-seam.

Canco also offers experienced help from technical service experts and other specialists. Even the Canco oval works for you! Through its top-rated CBS-TV show, DOUGLAS EDWARDS WITH THE NEWS, Canco helps boost sales of aerosols in Canco cans. So—for *any* pressure product, take the leaders' tip and come to Canco first!

AMERICAN CAN COMPANY

Just Printed! Colorful folder on Canco products and services in the aerosol field. For a free copy write to American Can Company, 100 Park Ave., New York 17, N.Y.



THIS, THAT AND THE OTHER . . .

. . . transparent packaging films play a unique role in protecting and "moving" merchandise of every description. The variety is almost infinite.

As the largest manufacturers of cellulose film in Europe, as makers of B.C.L. polythene film and agents for cellulose acetate films, we are proud of our ability to supply types and gauges to suit every product. We are the world's biggest exporters of cellulose film and can supply the non-moistureproof type in widths of up to 81 inches.

Our scientists, top men in their field, in constant touch with merchandising problems and solutions, work continuously to evolve new and improved materials such as MXXT cellulose film, which is copolymer-coated by aqueous dispersion, making it *the most moisture-proof packaging film in the world.* Their researches have also produced polythene-coated cellulose film and special films for wrapping such goods as fresh meat, fruit and vegetables, and quick-frozen products.

Colodense Limited, an associated company, have an international reputation as high-quality colour-printers and converters of transparent films.

Whatever your product, we have the best film for it. Whatever your packaging problem, we shall be delighted to hear from you. Why not write to us today?

BRITISH CELLOPHANE LIMITED

Commercial Offices: 12-13 Conduit Street, London, W.1., England

"Cellophane" is the registered trade mark of British Cellophane Limited in the following countries: The United Kingdom, Australia, Ceylon, Cyprus, Denmark, Eire, Gibraltar, Hong Kong, Iceland, India, Jamaica, Malaya, New Zealand, Nyasaland, Pakistan, Northern Rhodesia, Southern Rhodesia, Singapore, Trinidad and Tobago, Union of South Africa.

Candy, cookie-cracker, and similar plants frequently must package 20 or more different items and sizes. The giant volume items justify single-purpose, specialized weighers. But what about the remaining items which must be handled on a multi-purpose weighter? This new, semi-automatic net weigher with unique versatility and precision accuracy provides the answer.

Accuracy and Versatility...

get both with WRIGHT JUNIOR WEIGHER

Precise Wright's exclusive Hy-Tra-Lec® weighing precision guarantees pinpoint accuracy.

Versatile One ounce to one pound range, quickly adjustable. Easy change-over features including interchangeable spouts and weigh buckets.

Gentle Bulk and dribble vibratory feed handles the product with extreme care, and the weighed charge gently slides into the awaiting bag, box, jar, or can.

Efficient This machine possesses the same quality design and construction characteristic of Wright's automatic systems.

Low Cost The Junior Weigher pays for itself from savings gained by its versatility and accuracy.

WRIGHT MACHINERY COMPANY
DIVISION OF SPERRY RAND CORPORATION
DURHAM, NORTH CAROLINA

DISTRICT OFFICES: *Ridgefield, N. J., LaGrange, Ill., Dallas, Texas, San Francisco, Calif., Durham, N. C.*

CANADA: *Sperry Gyroscope Ottawa Limited, Ottawa, Ontario, Canada*

MAIL THIS COUPON
FOR DETAILED LITERATURE

WRIGHT MACHINERY COMPANY
Division of Sperry Rand Corp. A-1
Durham, North Carolina

Gentlemen: Please send me detailed literature and price information on your Wright Junior Weigher.

NAME.....

COMPANY.....

STREET.....

CITY & STATE.....

PRODUCTS.....

SILK SCREENED PACKAGING

THAT
SELLS THE MOST...
TALKS THE LOUDEST...
ATTRACTS THE MOST ATTENTION...
BEGINS WITH

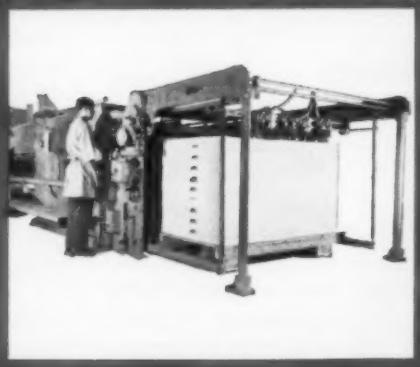
epicolor®

Epicolor is an exclusive F.M.A. combination of people, research and equipment resulting in silk screen printing developed to its highest form.

Put the powerful impact of vibrant Epicolor into *your* packaging . . . and you put maximum effectiveness into your product where it counts the most — at the point of sale. On a super market shelf . . . on a drug store counter . . . in a window display, your package becomes your most vocal selling tool when F.M.A. Epicolor smashes it into your customer's buy-sight.

On any surface, Epicolor silk screen printing can produce the boldness of solid color . . . the brilliance of metallics . . . the flash of fluorescents . . . the distinctiveness that makes customers stop, look and buy. Let us *show* you the difference Epicolor can make on your package.

the world's newest, largest, fully automatic equipment!



This 52" x 76" F.M.A. silk screen press is the newest, largest fully automatic equipment in use in the world today. Its size and complete automation make the impact of silk screen as practical for your packaging as it is powerful . . . puts the cost on a realistic, profit-proved basis. Frank Mayer & Associates maintains the finest *complete* silk screen organization in the Middle West; the most modern, fully automatic equipment; our own complete photographic and creative art departments.

to make your package
your product's best salesman —
write, wire or phone today

PACKAGING DIVISION:
FRANK MAYER & ASSOCIATES, INC.
4727 N. TEUTONIA AVE., MIL., WIS. PHONE: CUSTER 3-4770
IN CHICAGO, CALL BILL CLARK — MO. 4-1760 • IN DETROIT, CALL VERNE SORGE — TO. 9-2550

USE OUR

Engineering

DEPARTMENT

FOR YOUR PACKAGING PROBLEMS

Years of experience and up-to-the-minute thinking are available without charge . . . a valuable service. Contact our nearest office for information.

Why pay more?

For quality products . . .

call CLEVELAND!

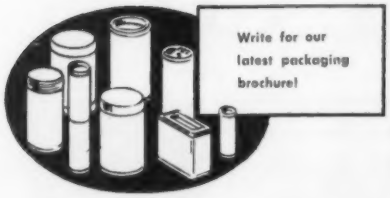
RA-PID-GRO selected a CLEVELAND CONTAINER because of the protection it gives their Miracle Plant Food. This composite container will take rough handling and yet is easy to use. Such a container can be designed to fit your particular requirements . . . and at surprisingly low costs!

COLORFUL WRAPS AND LABELS are available in unlimited eye-catching combinations.

SPECIAL LINERS, like aluminum foil, parchment, paraffin, etc., safeguard against deterioration and moisture.

CLOSURES of many styles and sizes are stocked, making your packaging costs even less.

Cleveland Containers are available in almost every size required.



Write for our latest packaging brochure!

PLANTS & SALES OFFICES:
CLEVELAND
DETROIT
CHICAGO
MEMPHIS
LOS ANGELES
PLYMOUTH, WIS.
JAMESBURG, N. J.
OGDENSBURG, N. Y.

THE
CLEVELAND CONTAINER CO.
6201 BARBERTON AVE. • CLEVELAND 2, OHIO

ALL-FIBRE CANS • COMBINATION METAL AND PAPER CANS • SPIRALLY WOUND TUBES AND CORES FOR ALL PURPOSES.

CLEVELAND CONTAINER CANADA, LTD.
Plants and Sales Offices: TORONTO AND PRESCOTT, ONT. Sales Office: MONTREAL

SALES OFFICES:
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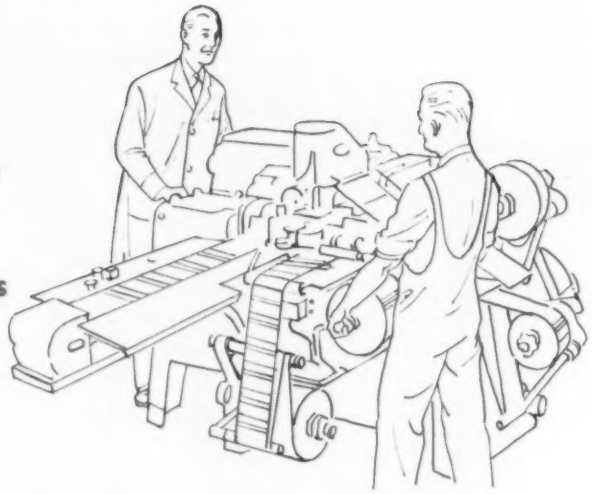
The need to maintain trouble-free operation of high-speed laminating and packaging machines has led to greater demands upon the high qualities of foil.



The excellence of Venesta foil as the modern packaging material is due to . . .

Venesta foil is second to none in brilliance of finish

Checking at all stages of rolling ensures consistency of gauge.

Venesta foil can form an absolute barrier against bacteria, moisture vapour, odours and gases.

Venesta foil can be laminated to paper or plastic film for specialized end uses.

Direct printing or embossing on Venesta foil eliminates the need for labels.

Throughout manufacture and processing, Venesta foil is checked and rechecked. Because of this constant attention to quality at *all* stages, packers and converters can feel confident that their machinery will run more smoothly, and that lamination will be carried out more satisfactorily.

VENESTA FOIL

Agents for the United States of America & for Canada

PARSONS & WHITTEMORE INCORPORATED

250 Park Avenue, New York, 17, N.Y. phone Yukon 6-6000

For the addresses of our Agents in other countries write to VENESTA LIMITED, Vintry House, Queen Street Place, London E.C.4, England

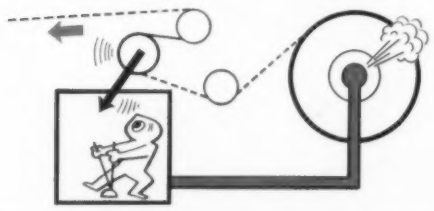
VENESTA

check your unwind tension controls

For continuous profitable production at lowest possible cost in web-fed processing...

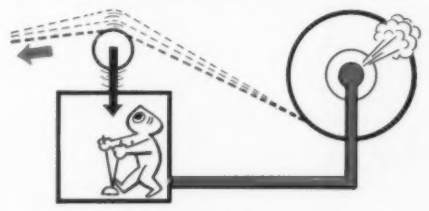
If you want more profitable production from high speed winders, slitters or web-fed printing and processing machinery, **first check your unwind web tension controls!** No matter what material you work with, remember this...a relatively low investment in a dependable Cameron unwind tension control system will protect your profits by permitting higher, more productive operating speeds...by improving the quality of your finished product...and by minimizing loss through snap-offs. A fully automatic Cameron tension control system can be custom-fitted to meet the exact requirements of the material, the speed and the web-fed process with which you are concerned.

CAMERON 900



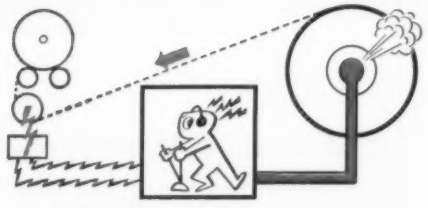
Extraordinary range and sensitivity assures instant correction of extreme parent roll irregularities. Versatile range of **MODEL 900** provides constant tension on a wide variety of plastic films, foils and papers. In **MODEL 900,** the fully automatic brake pressure control mechanism is actuated by low-inertia, low-friction dancer roll which moves in a horizontal plane to provide slack take-up on the unwinding web. This system provides exceptional range for extreme correction problems.

CAMERON WEB-TROL*



A highly accurate, fully automatic web tension control system which provides extremely fast correction for many types of roll-fed printing and processing equipment, as well as for slitters and roll winders. In **WEB-TROL,** the brake pressure control mechanism is actuated by a sensing roll which moves .010" in a vertical plane. Vertical travel of the sensing roll is governed by variations in down-pull on the unwinding web as it slackens or tightens, due to parent roll irregularities. *patent pending

CAMERON CAMATROL*



A low cost, dependable, fully automatic system for maintaining constant web tension control. **CAMATROL** can be applied to many types of roll processing machines. With **CAMATROL,** the brake pressure control mechanism is actuated by an electric impulse which is governed by variations in load on the rewinding drive as the unwinding web slackens or tightens. *patented

Three systems to choose from!

IT PAYS TO START your processing run with dependable control of the unwinding web. Reduce your costs, improve the quality of your finished product, and get more profitable production at higher speeds by starting with a Cameron custom-fitted web tension control system. Replace old, inadequate controls now, and see the difference! Ask Cameron specialists to tell you all about **CAMATROL, WEB-TROL,** and **MODEL 900.** Write, wire or phone today.

Cameron Machine Company, Franklin Road, Dover, N. J.

Canada: Cameron Machine Co. of Canada, Ltd., 15 Hatt St., Dundas, Ontario
France: Batignolles-Chatillon, 5 Rue De Monttessuy, Paris (7e) France

Built by Cameron's team of specialists

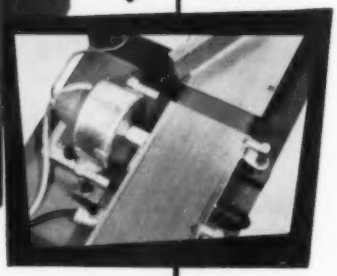
AA-356

50 years devoted exclusively to the design and manufacture of slitting and roll winding equipment.

A UNIT OF THE
BARTELT
PRODUCT CONTROL SYSTEM

BARTELT *Checkweigher*

✓ Fast
✓ Accurate
✓ Versatile



Constant Motion...
Complete Electronic Operation!

To classify your product by weight, Bartelt has introduced a new design in checkweighing. This precision instrument utilizes a new principle permitting continual motion operation at speeds up to 200 units per minute!

The product is conveyed by a polyester belt smoothly over the platform attached to the sensitive weighing head making possible an acceptance range tolerance of plus or minus ¼ ounce. Photo electric eyes control the sequence of the weighing operation, meeting the varying output of the infeed conveyor.

Engineered for critical production conditions, this unit is arranged for ease of operation and maintenance. The control console is mounted on rollers and connected to the weighing unit by cable. It can be remotely located, and removed entirely from the area for cleaning.

Also available is the Bartelt Servo Control. Working in conjunction with the Bartelt Checkweigher; it translates package weight variations into automatic compensating adjustments when a definite trend is established.

The Bartelt Checkweigher is one of the several fine instruments in the Bartelt Product Control System. Send us your product control problems.

BARTELT ENGINEERING CO.
1900 HARRISON AVENUE
ROCKFORD, ILLINOIS
New York Office, 370 Lexington Ave.

CUT COSTS

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pressure-sensitive

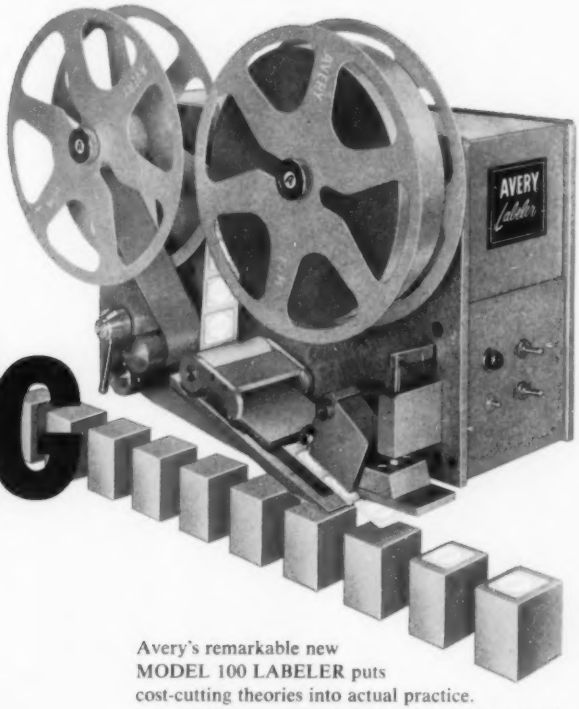
LABELING

with the new

AVERY

fully automatic

LABELER

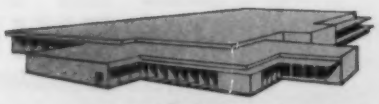


Avery's remarkable new MODEL 100 LABELER puts cost-cutting theories into actual practice. Completely automatic, it applies *individual die-cut pressure-sensitive labels in exact register* on most all surfaces with amazing efficiency and speed.

Fed from a roll which can supply up to 20,000 labels without reloading, Avery's MODEL 100 LABELER easily can apply from 40 to 300 pressure-sensitive labels a minute!

Developed by Avery, the originators of pressure-sensitive labeling, the automatic MODEL 100 LABELER incorporates real mounting versatility and may be modified substantially to meet individual requirements. If high quality labeling and unusual economy would be welcome in your operation . . . this Labeler is worth your strict investigation . . . today.

WRITE FOR FULL DETAILS NOW!
there's no obligation



Always ask for **AVERY LABELS**

what a difference they make!

AVERY ADHESIVE LABEL CORP., Div. 127
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☐ Please send me further details on how Avery Labels can save me time and money.
☐ Please have your sales representative call soon.

Name_____

Company_____ Title_____

Address_____

City_____ Zone____ State_____

Manufactured and distributed Throughout the World. For other countries, write **Foreign Operations**, Avery Adhesive Label Corp., Monrovia, California.

P. S. AVERY FILE FOLDER LABELS, CORRECTION TAPE, PHOTOMOUNTS, AND PRICE MARKING LABELS ARE AVAILABLE AT STATIONERS EVERYWHERE.

METAL PACKAGES PRODUCED PERFECTLY

Year... after Year... after Year...

IN *our fifty-seven* years in the metal packaging industry Heekin has served thousands of customers in every field of merchandising. These satisfied customers are proof that throughout the years hard work and research have produced a perfect metal package . . . *plain and lithographed* . . . every time. Remember . . . Heekin Personal Service is as close as your telephone.

HEEKIN
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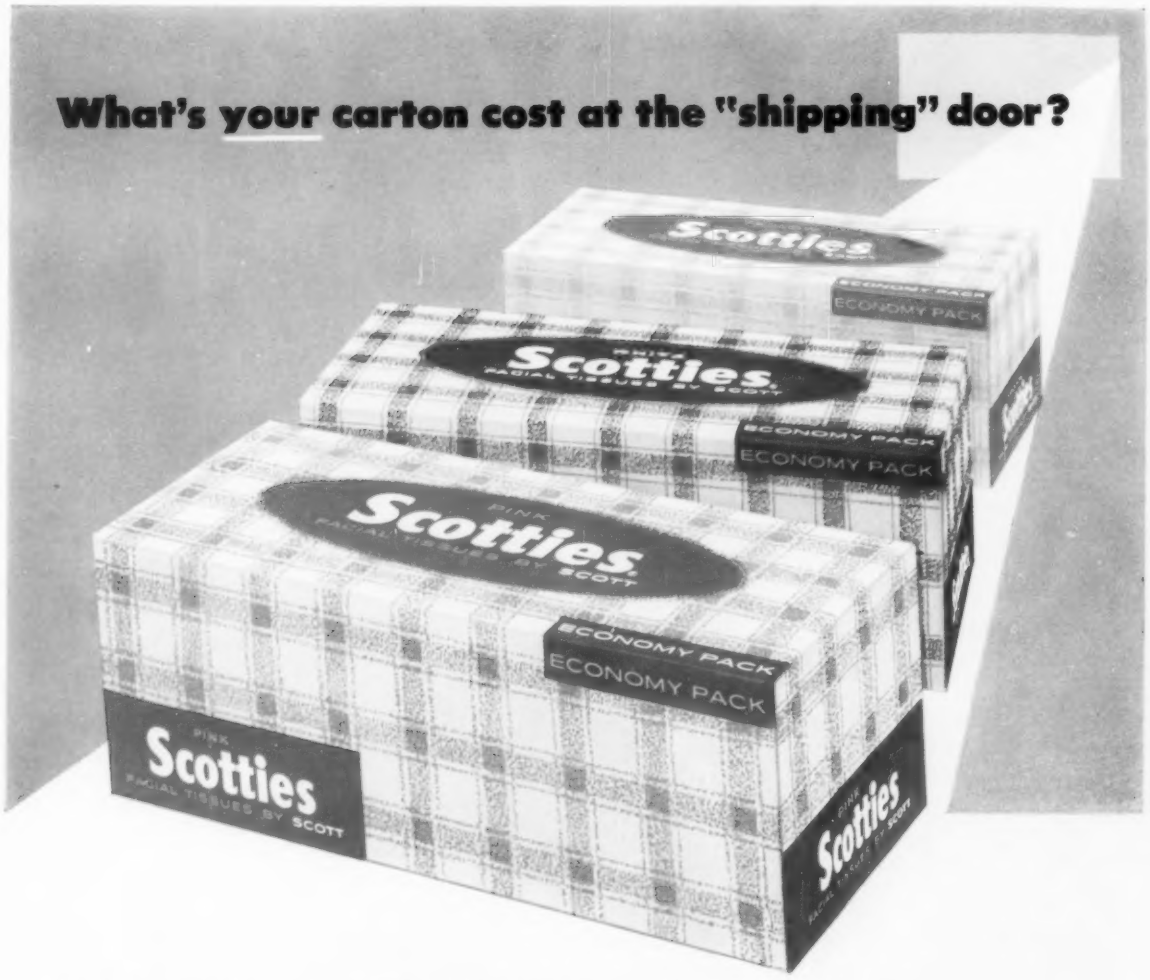
THE HEEKIN CAN CO. *PLANTS IN OHIO, TENNESSEE & ARKANSAS—SALES OFFICES; CINCINNATI, OHIO; SPRINGDALE, ARKANSAS*



Planned Packaging

...helps Scott Paper Company keep theirs low!

For over 5 years, Ohio Boxboard has been an important carton supplier to Scott Paper Company. Carton performance on high speed packing lines for popular Scotties facial tissues has been outstanding.

Our ability as Planned Packaging experts to design and deliver sure-folding cartons that are *truly* low cost as they leave your all important shipping door has been demonstrated over the years.

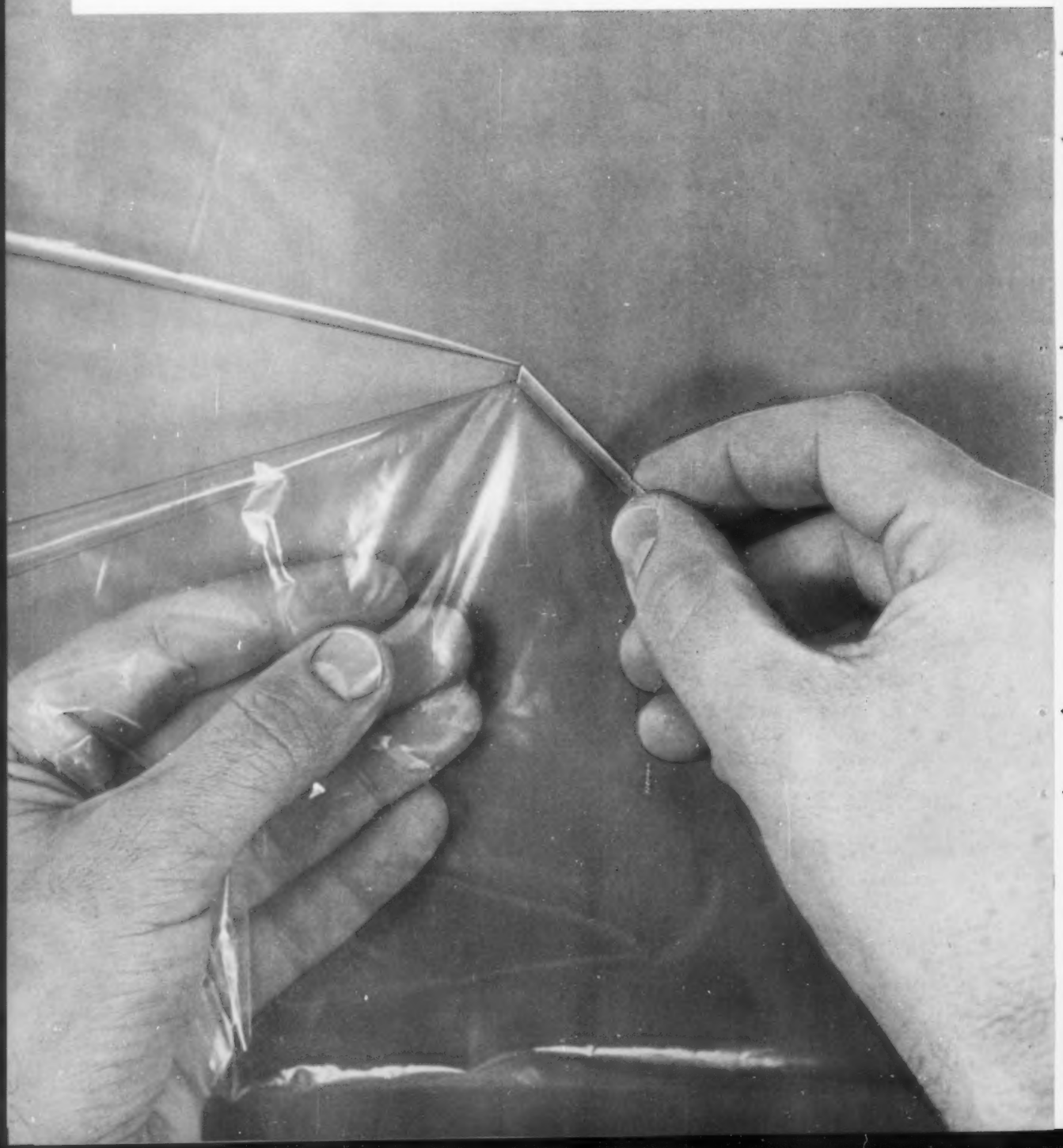
Whether you need improved styling or faster running cartons, Planned Packaging experts will gladly serve you —even to the design and construction of special machinery for utmost packaging efficiency. Just write or call.

Planned Packaging moves merchandise.

The Ohio Boxboard Company
Rittman, Ohio
Containers • Cartons • Paperboard

PLANTS
The Ohio Boxboard Company, Rittman, Ohio
Empire Box Corporation, South Bend, Indiana
The General Carton Company, Cleveland, Ohio
The Norwalk Paper Box Company, Norwalk, Ohio
The Ohio Boxboard Co., Inc., Pittsburgh, Pa.
Western Containers, Inc., Lockport, N. Y.
Fairbanks Containers, Inc., Middletown, Ohio
Champion Containers, Inc., Plymouth, Michigan
The Ohio Boxboard Company, Cuyahoga Falls, Ohio
The Ohio Boxboard Company, Youngstown, Ohio

New MARLEX* transparent breaks the packaging

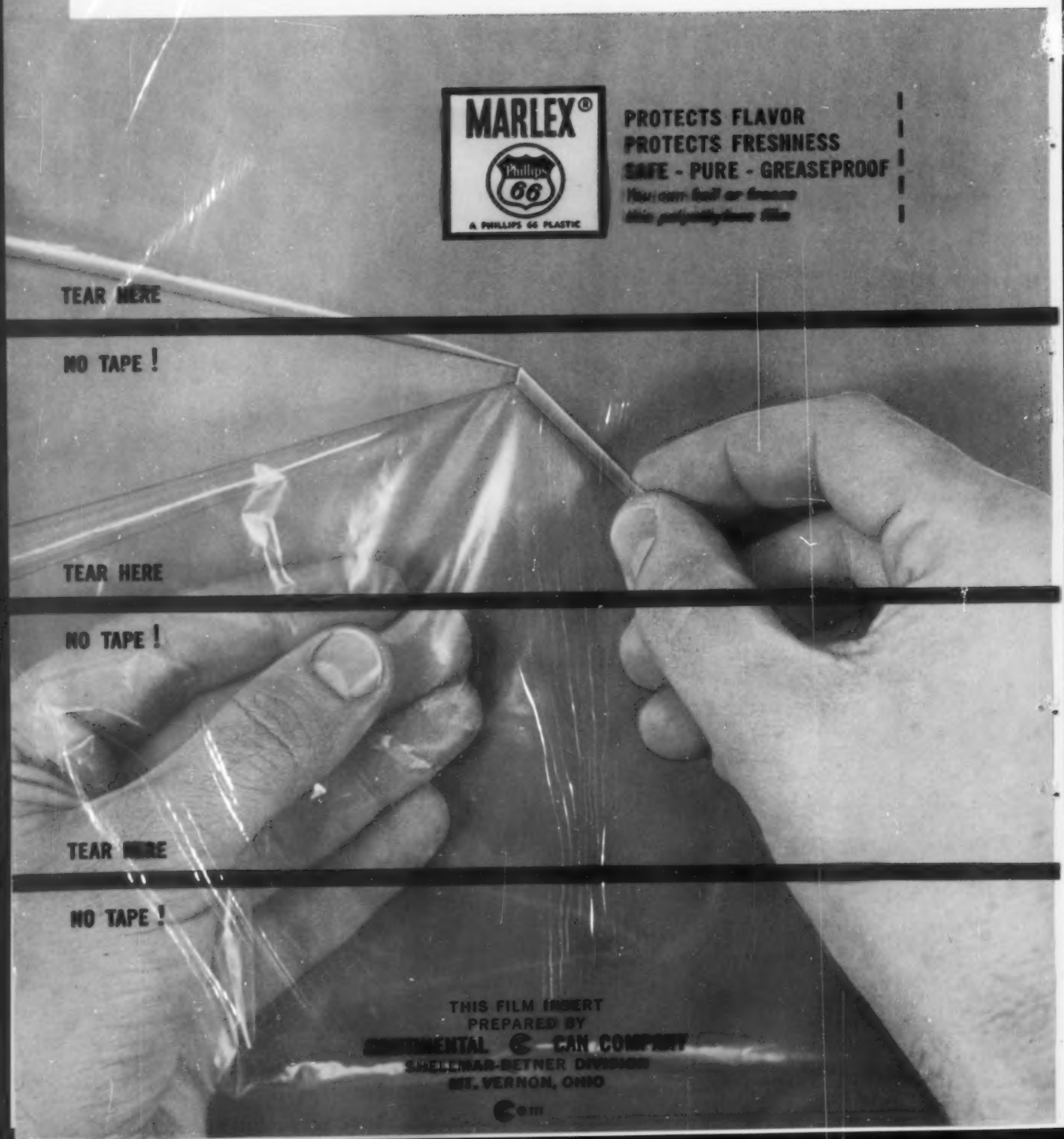


MARLEX®

Phillips 66

A PHILLIPS 66 PLASTIC

New MARLEX* transparent breaks the packaging



polyethylene film cost barrier!

Costs 16% to 39% less than cellophane

Recent Phillips developments make it possible for film manufacturers to extrude *clear, transparent film* from MARLEX resin. And this new MARLEX film can be readily torn in a straight line *with no tear tape whatsoever!*

MARLEX film *equals* cellophane in clarity, sparkle and crispness . . . *equals* ordinary polyethylene in printability. MARLEX film as an overwrap is *far superior* to cellophane in shelf-life because it is unaffected by moisture . . . does not become brittle on the shelf. MARLEX film resists fats and grease. Freeze it! Boil it! MARLEX film can take it!

The new, low-cost, heat-sealable MARLEX film has excellent stiffness and slip. It handles efficiently in "push-through" overwrap machinery equipped to seal polyethylene. Here at last is a polyethylene film with none of the limpness, sag and blocking tendency of conventional polyethylene.

Whatever your products—baked goods, candy, cigarettes, frozen foods, cereals—you can now package them *better* for *less* money in MARLEX film.

If you *make* film . . . if you *use* film, get in touch with our nearest Plastics Sales Office for full information.

No other type of material can serve you so well in so many different ways at such low cost.

PHILLIPS CHEMICAL COMPANY
Bartlesville, Oklahoma
A subsidiary of Phillips Petroleum Company

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RYan 1-0557

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Digby 4-3480

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TErrace 4-6600

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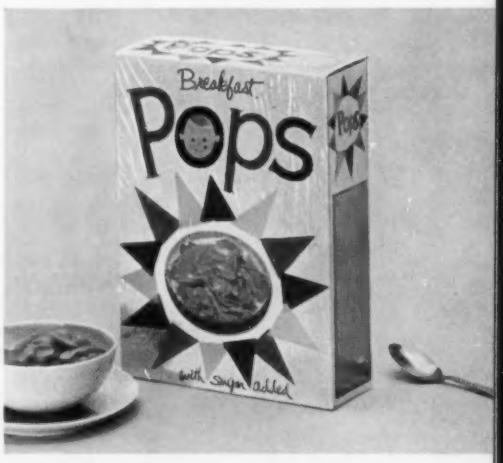
Bartlesville, Oklahoma
Bartlesville 6600, Ext. 8108

*MARLEX is a trademark for Phillips family of olefin polymers.

Bread and other baked goods stay oven-fresh longer when packaged in sparkling clear, low-permeability MARLEX film. This economical film is readily printed and heat-sealed.

Candy, nuts and other foods last longer on the shelf when sealed in MARLEX film. If creamy, they won't dry out. If crisp, they won't get soggy. Fine for window packages.



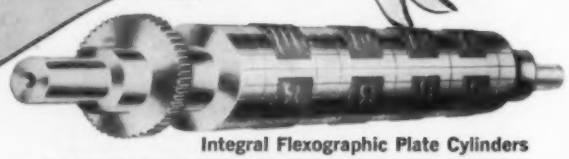
Cereals, crackers and various soft goods packaged in boxes maintain their original fresh appeal with MARLEX film overwrap. It's also available in appealing *colors!*

Make a Good Impression!

PAMARCO

Precision ROLLS

for GRAVURE and FLEXOGRAPHY

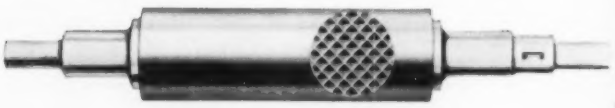


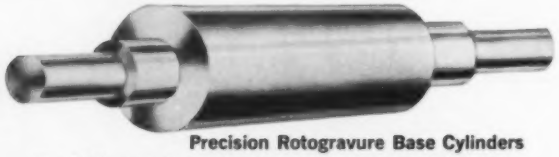
Integral Flexographic Plate Cylinders

Electronically-balanced for highest press speeds! Tubular design for minimum weight, yet integral in construction for maximum rigidity. All surfaces ground to guarantee closest tolerances on diameters and concentricity. Balancing insures true "kiss impression" at high speeds. Permit closer printing tolerances, finer printing.

Evenflo Engraved Inking Rolls

Fast service on flexo and gravure rolls! Apply ink and other fluids in uniform volume with minimum adjustment. Permit higher press speeds without loss of quality. Standard equipment on modern presses. New rolls to specifications; fast re-engraving on used rolls.





Precision Rotogravure Base Cylinders

For high speed, continuous service! Ground finish insures absolute concentricity, diameters "on the nose." Proven method of construction and electronic balance insure permanent accuracy at highest press speeds, eliminate press down-time. Available with or without copper plating.

Micro-Lok Demountable Cylinders

The industry's fastest, most accurate demountable! Mount and demount in seconds; no skill required. Cylinders form solid joint similar to integral cylinders. Can be used on any width shaft. Foolproof principle guarantees permanent accuracy. Available in light weight alloy or steel.

Paper Machinery & Research · Inc

ROSELLE, NEW JERSEY
Telephone: CHestnut 1-1200

COMPLETE PLATING DEPARTMENT—Pamarco's own chrome and copper plating facilities are one of the largest and most modern in the industry.

CUSTOM CUT STEEL GEARS—Assure accurate register. All gears are manufactured in Pamarco's own plant. Specify when ordering plate rolls.

EXPERT ENGRAVING—Special applicator, printing and embossing rolls produced to the highest standards of the trade.

PAMARCO ADVISORY SERVICE—Our engineers are roll experts. Pamarco's plane provides prompt, nation-wide field service.

Precision Rolls for Packaging, Printing, Plastics and General Industry

PAMARCO'S fully integrated facilities now include Roll Manufacturing, Machine Engraving, Copper and Chrome Plating, **Gravure Engraving**—All under one roof!

Background for packaging

Notes, quotes and comments

Official verification of an economic situation favorable to packaging's immediate future comes from new U. S. Dept. of Commerce data. In its spring report, the department sees these factors as having "a favorable stabilizing influence": the slowdown in container output in 1957 and the continued relatively high level of consumer purchases of non-durable goods, which together create minimum inventories of containers in the hands of packagers. More than half of the continuing demand for packages comes from manufacturers of foods, drugs, toiletries and cosmetics, for all of which consumers are keeping the cash registers ringing.

Retailers say they have five principal complaints about the packaging of everything from flashlights to foundation garments: (1) package facings are too wide and shelf space is hogged by too many sizes (see "The Forgotten Side," this issue, page 87); (2) twin packs force multiple sales without regard for consumer preferences, necessitating the breaking up of multiple packs; (3) some packages cannot be handled easily without their counter merchandisers, for which many merchants have no space; (4) packages lack sufficient informative copy for self-service selling; (5) there are too many garish packages; they should be replaced with improved designs appealing to higher consumer-taste levels and more appropriate to improved retail-store decor. These are the findings of a survey of 200 retailers by Ken White Associates, industrial designers.

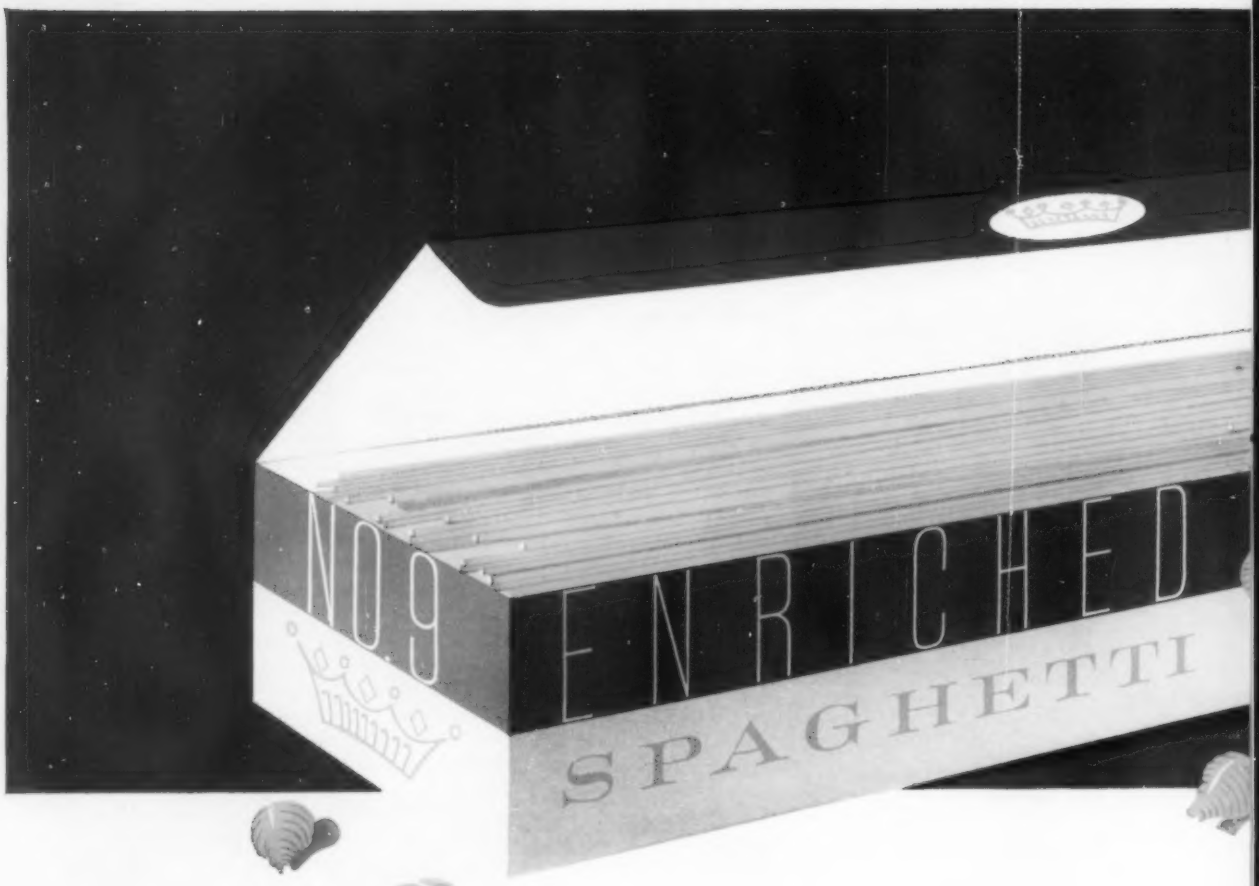
Competitive materials for packaging are performing some significant economic acrobatics. Since the slowly rising price curve of cellophane crossed the plunging price curve of polyethylene film, packagers have been watching similar price relationships among several packaging materials. One packager is banking on semi-rigid containers made of new high-density polyethylenes partially because he expects they will be competing favorably pricewise with glass in the near future (see "High-Density Containers," this issue, page 92). And a major toiletries manufacturer is "watching all developments in aluminum containers" because the price of aluminum is going down while the price of tinplate is rising.

Sales impact of multipacked products formerly sold singly is strikingly demonstrated by the success of chain drug stores in handling packaged cigars. With massive, high-impulse display units, these stores are becoming the only cigar outlets in many shopping centers, says *Chain Store Age*. Five-packs account for about 40% of all cigars sold in chain drug outlets and up to 75% in chain units that give them the biggest push.

Three million small businesses in the United States that distribute the output of big business should require all products to be packaged so that the merchandise sells itself. This simple but practical advice comes from the Federal Government's Small Business Administration and is based on a survey by the National Society of Sales Training Executives, which uncovered 150 kinds of management assistance offered by big companies to their wholesalers, retailers and service organizations.

Don't overlook the possibility of trading up your product with even a slight packaging innovation. Case in point: a packager added a 3-cent blister pack to a 29-cent item originally bulk displayed in supermarkets and marked it up to 49 cents. Result: a 500% sales increase.

Aerosol packaging, boosted by more than 10 million units in its first four months as a toothpaste dispenser, is on the threshold of further big gains. Likeliest new applications range from an eyeglass cleaning preparation (now being tested by B. T. Babbitt) to instant coffee, already introduced abroad. Meanwhile, a unique new aerosol-packaged product is Freon in sufficient quantity to inflate an automobile tire to 22 lbs. pressure in six seconds. And a new company, [*Continued on page 46*]



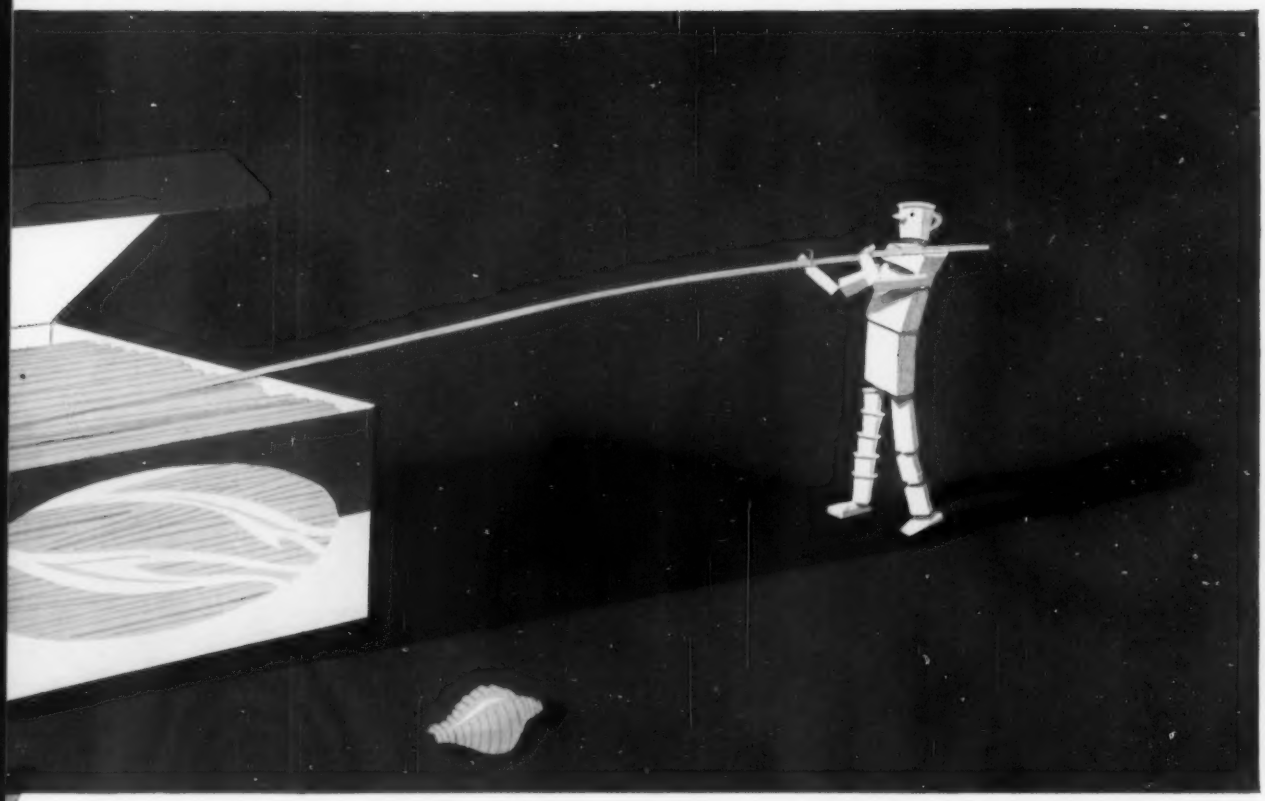
PASTA PUSHER!

It's a fact!

Whether your product is pasta, baby cereal or dried beans, you can push shelf sales *up* with a mouth-watering package made from BRITE-PAK Coated Board.

Make your product look as good as it tastes. Add extra punch to your packaging—economically!

WV BLEACHED BOARD DIVISION · WEST VIRGINIA



Check these major advantages for any dry food product:

1. BRITE-PAK Coated Board is bright, white and sanitary on both sides and *all the way through*—a natural for your fine food products.

2. The gleaming coated surface enables you to print sharper, more *attractive* illustrations — BRITE-PAK Coated Board is *the* modern replacement for old fashioned, dry food carton materials.

Write or call your Westvaco representative today for full information on all of the BRITE-PAK Bleached Board grades.

BRITE-PAK
COATED BOARD

PULP AND PAPER COMPANY 230 Park Avenue, New York 17, New York

United States Can Corp., subsidiary of Victor Metal Products Corp., is now producing an aluminum aerosol can competitively priced below steel containers. Best bet for its first use is to dispense the shaving-cream product of a major soap manufacturer.

Who selects the non-foods that rack jobbers place in individual supermarkets? The answer, important to many packagers, comes from the American Rack Merchandisers Institute: "Service personnel—the men and women who go into the markets to stock non-foods departments"—are being given more responsibility for special promotions, tie-in displays and stock-rotation jobs formerly reserved to top men in rack-merchandising firms. For packagers of such non-foods, this means they have a broader audience to reach.

Background for packaging

Pilferproof packaging has not stopped shoplifting. *Time* magazine estimates that at least $250-million worth of goods disappear from U. S. supermarkets each year and the total is increasing. Favorite devices are distended bras for cheese and caviar, bagsful of used diapers for canned goods, fake laundry packages for packaged meat, bulky, many-pocketed coats, stretch socks and slacks for candy and cigarettes, even the containers of inexpensive goods to conceal higher-priced products.

Tomorrow's housewives who are now impressionable students in high school and college home-economics courses are not getting maximum exposure to convenience foods and other packaged products because of low school budgets, according to *Food Field Reporter*. To help augment the home-economics-teacher's food budget, 1,000 schools and colleges are using a commercial plan under which they buy up to 50 branded products a month and are fully reimbursed by manufacturers in exchange for reports on use of the products.

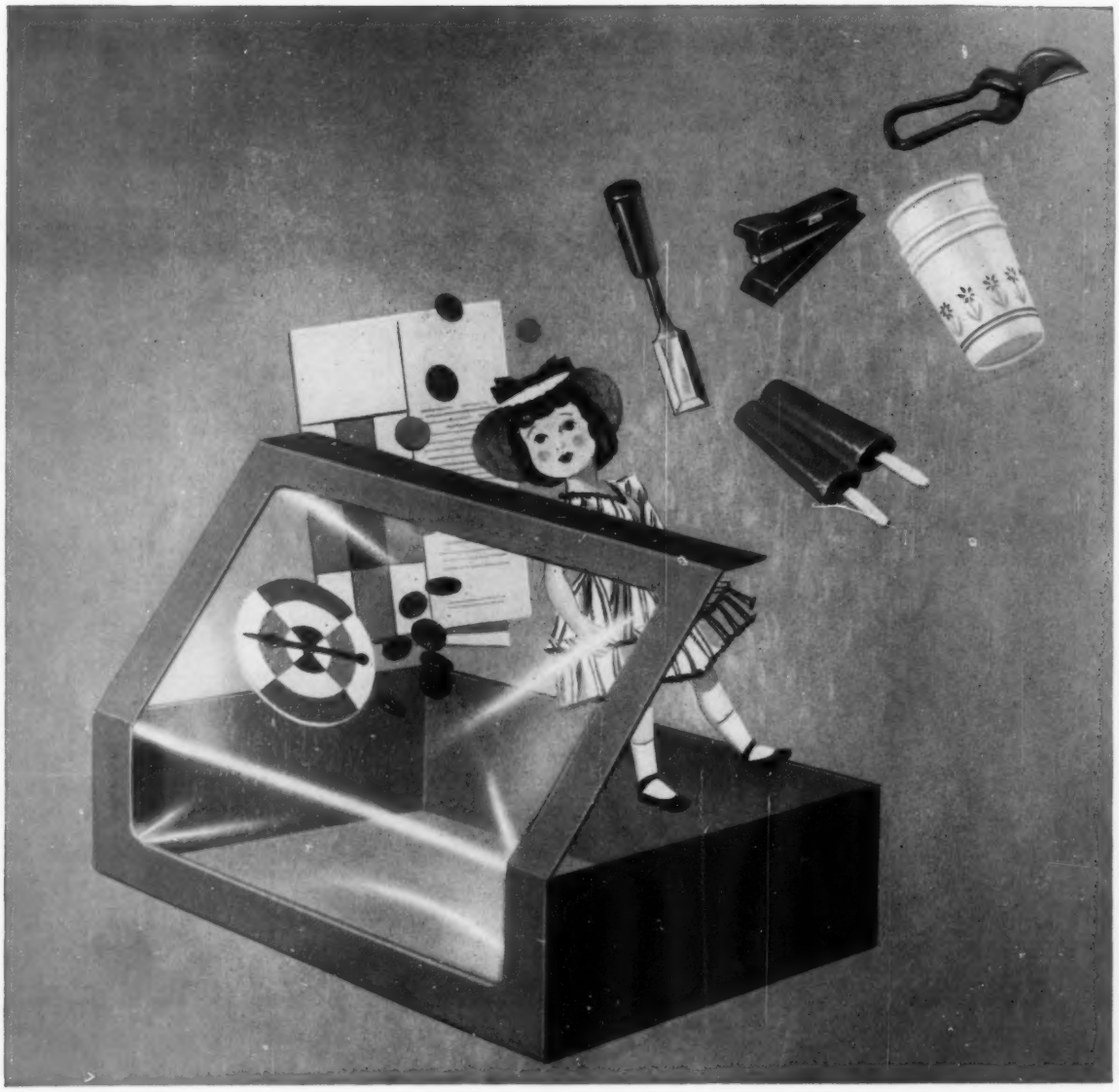
Increased use of triple-wall, corrugated fibreboard shipping containers is likely now that freight-classification authorities have increased the maximum permissible load for corrugated-packed shipments by rail. Effective May 20, a supplement to Rule 41 of Uniform Freight Classification 4 permits rail shipments up to 275 lbs. for any item in triple-wall board with a unit-size limit of 120 in., compared with a former limit of 160 lbs. for any corrugated-board shipper.

[*Continued from page 43*]

Consumer demand for convenience promises an expanding future for the whole packaging field and a big boost will come from the modification of standard containers to suit varied products. As a case in point, an Owens-Illinois Glass executive cites the addition of polyethylene dispensing fitments to glass bottles and jars for convenience packaging of condiments, spices and similar products. He reports that one company now offers 72 spices in cylinder-type glass bottles with such fitments.

Ever think that your packaged goods may move faster on one side of a store than on the other side of the same outlet? Perhaps this is the answer: A recent 18-country retail survey reported by *Vision*, a British publication, disclosed that most women turn right on entering a store and tend to buy goods on that side.

Vending machines, which sold more than $2-billion worth of goods in 1957, have a potential of $4 to $5 billion by 1965, but operators say they can't exploit this "potentially terrific outlet for packaging" without help from packagers: "We need new forms of food packaging," says the president of the National Automatic Merchandising Assn. "We need packages which are rigid enough to withstand transportation and dispensing from our machines. We need packages which are either transparent or illustrated to serve as merchandising aids, to increase sales. We need packages which can serve as eating utensils as well as serving utensils. We need packages, in addition to cans, which may be put through pasteurization or other food-preservation techniques."



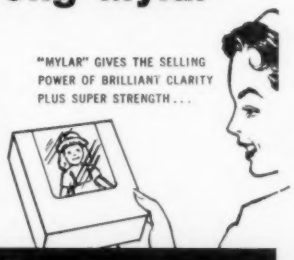
Give your product the advantages of transparent packaging... use windows of clear, strong Mylar®

Is your product tough to package, slow to sell? Why not give it complete protection plus the advantages of visible packaging in window boxes made with super-strong Du Pont "Mylar"* polyester film?

Windows of "Mylar" have excellent tear and puncture resistance, exceptional impact strength, long life. "Mylar" is unaffected by grease and oils. And its superior dimensional stability prevents box warping. In addition, "Mylar" gives your window boxes the advantages of dazzling, sales-winning transparency.

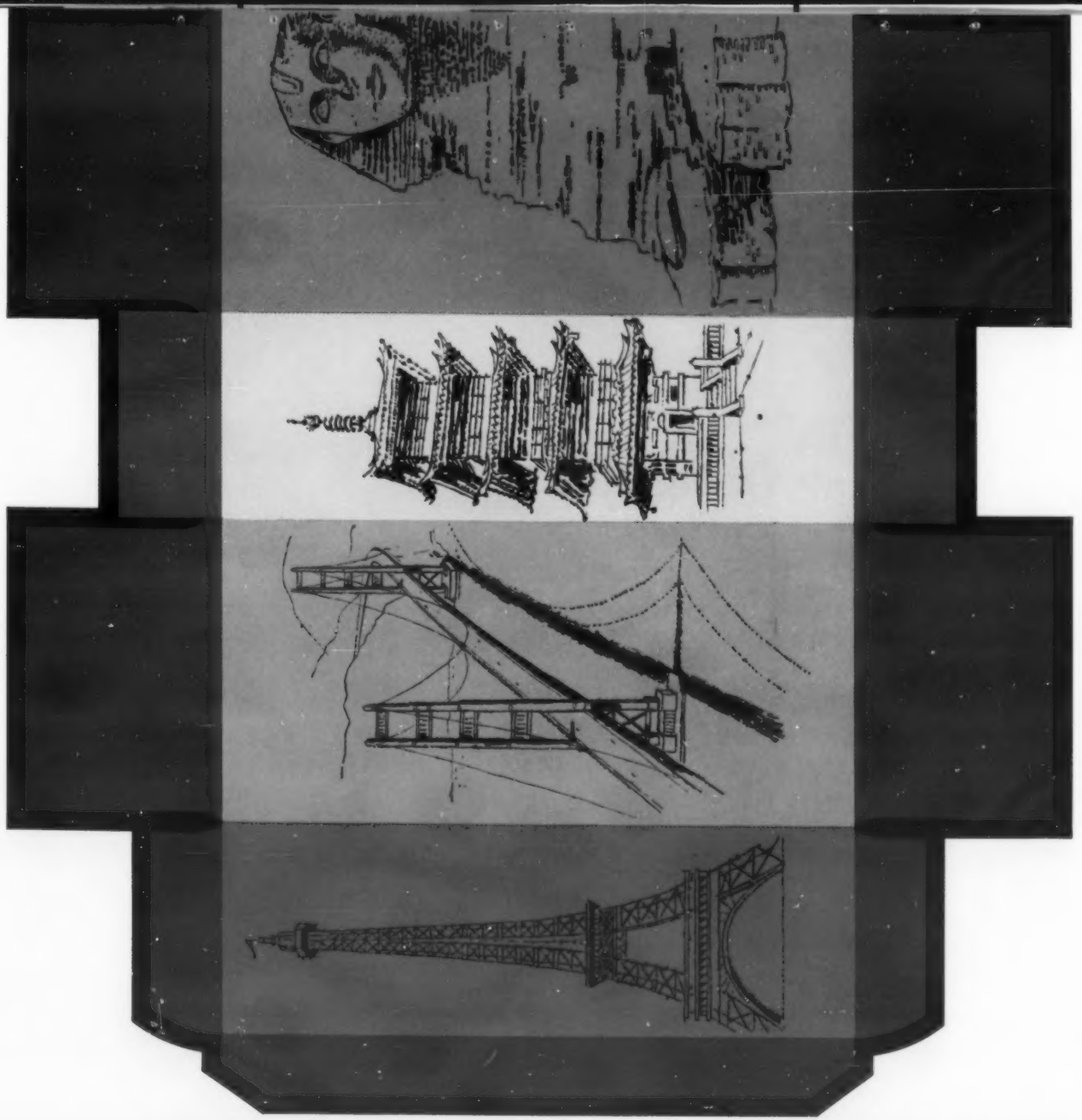
BE SURE TO SPECIFY windows of "Mylar" on your next carton order. For the full story, call your carton supplier. E. I. du Pont de Nemours & Co. (Inc.), Film Department, Wilmington 98, Delaware.

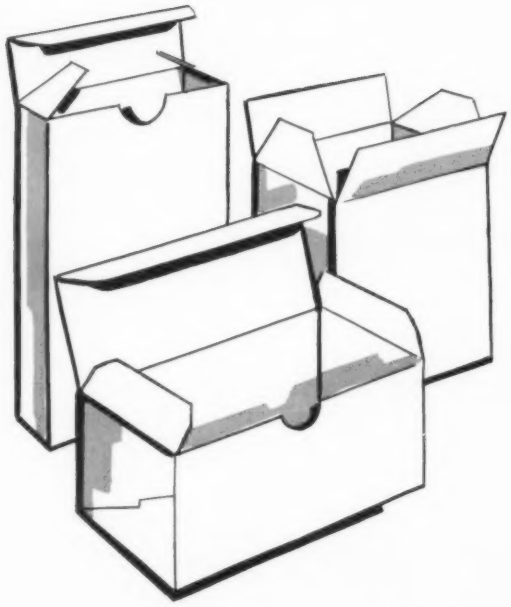
*"Mylar" is Du Pont's registered trademark for its brand of polyester film. Du Pont does not make window boxes.



DU PONT
REG. U.S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
. . . *THROUGH CHEMISTRY*

DU PONT
MYLAR®
POLYESTER FILM





There's always an example of excellence ...in carton construction, it's **GAIR!**

Gair folding cartons, like buildings and bridges, must serve the specific purpose for which they're created. For Gair is expert in making the package fit the personality of the product it contains. Gair's skilled staff of carton engineers makes each package a smooth blend of functional design and operating efficiency.

Whether you need a bright white claycoat, or any of the other boxboard in Gair's tremendous selection – there's no finer folding carton anywhere than one engineered for your product by Gair!

GAIR creative engineering in packaging

Boxboard & Folding Carton Div. of CONTINENTAL CAN COMPANY, 530 Fifth Ave., New York 36, N.Y.

Here's the easy way to get quick help with packaging problems:

Use your Encyclopedia Issue!

It's a fact-crammed workbook

for day-to-day problem solving.

EXAMPLE: ***Which packaging machinery to buy?***

1. Read section "The Machinery of Packaging" for all the fundamentals.
2. Then check the Advertisers' Index—on the first page of the section—for adjoining ads on filling equipment, cartoning machinery, unscramblers, etc.
3. Secure additional names and addresses of suppliers from Buyers' Directory rosters: capping machine manufacturers, makers of conveyors, labelers, bundlers, etc.
4. Examine Encyclopedia insert "Review of Free Product Literature", pick out publications you want and send for them with enclosed post cards.

EXAMPLE: ***How to improve packaging line efficiency?***

1. Read the section "Efficiency on the Packaging Line" for a complete picture of the factors involved.
2. Then turn to the Advertisers' Index on the first page of this section and select ads whose contents bear on your problem.
3. Get further information in the Buyers' Directory: names and addresses of engineering consultants, machinery manufacturers and service organizations.
4. Look through the Encyclopedia insert "Review of Free Product Literature", select pertinent free publications and write for them on the conveniently enclosed post cards.

EXAMPLE: ***How to plan your package?***

1. See section "Planning and Developing the Package" for sound approaches to the many-faceted problem.
2. Next, consult the Advertisers' Index on the first page of this section for advertising of packaging consultants, contract packagers and materials suppliers.
3. Then turn to Buyers' Directory for state-by-state listings of: packaging designers, contract packagers, engineering consultants, custom embossers and laminators, paper lithographers, independent research and testing laboratories, and sample and package distributors.
4. Check the "Review of Free Literature" insert, select all possible helpful publications and send for them with enclosed post cards.

EXAMPLE: ***Which films and foils to use?***

1. See the section "Films, Foils and Laminations" for complete background. Note accompanying properties charts to aid selection.
2. Next, refer to the Advertisers' Index on the first page of the section for ads pertinent to your specific needs.
3. Check the Buyers' Directory (Materials and Supplies Section) for a wide listing of suppliers.
4. Look through the Encyclopedia insert "Review of Free Product Literature". Select desired brochures and leaflets on films and foils, and send for them with the handy enclosed cards.

The Encyclopedia is expressly designed to help you solve your problems. Reach for it next time you need help and see how valuable it can really be!

MODERN PACKAGING ENCYCLOPEDIA ISSUE

— — for fast, accurate answers to packaging problems

FOIL
TIN
LEAD
COMPOSITION TIN and LEAD
PURE ALUMINUM

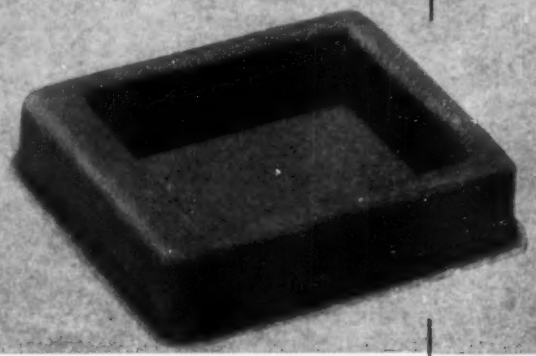
TO MARKET A HANDSOME PRODUCT.....

DESIGN A HANDSOME CASE.....

WITH A PLATFORM OF...

Stylour®

PLASTIC SHEET FLOCKED BEFORE FORMING



FOR THE FINEST IN LUXURY PACKAGING..

The super-high-impact, special formula STYRON® sheet holds its velvety finish even at the point of deepest draw. A wide range of brilliant colors in cotton or rayon provides hard-wearing, decorative finishes for packages using STYLOUR.

STYLOUR—Research Development of Nashua Corporation and The Gilman Brothers Company

THE GILMAN BROTHERS COMPANY

ESTABLISHED 1897 · GILMAN, CONNECTICUT

FIRST IN POLYSTYRENE AND POLYETHYLENE SHEET

STYLOUR—the last word in luxury packaging

THE GILMAN BROTHERS COMPANY
Dept. SMP, Gilman, Connecticut

Please send technical data and price information on STYLOUR—the plastic sheet flocked before forming.

Name.....

Firm.....

Address.....

City and State.....

INTRIGUED YOUNGSTERS LIKE TETRA PAK'S SHAPE.

DAIRY OWNER Standley says, "Tetra Pak has allowed us, a small dairy, to compete successfully against large national dairies for local school business."

SIMPLE HANDLING of stacked cases saves time for dairy, money for customers.

EASY OPENING at notched corner is simple even for second graders.

MISSOURI SCHOOLS LIKE TETRA PAK

Youngsters in 15 schools around Sikeston, Missouri, are enjoying their milk in half pint Tetra Paks. Why do students like Tetra Pak? First, they are intrigued by its novel shape. Then they find it simple to open—just a quick tear at the notched corner. Also, the low center of gravity makes balancing on trays easier, cuts number of "tip-overs".

Cafeteria managers like the new container too. The handy 18 unit Tetra Pak cases stack efficiently in refrigerators and are light enough for student help to manage. Because Tetra Paks crush flat when empty, less space is needed in disposal bins.

Reiss Dairy, which supplies these 15 schools with over 180,000 Tetra Paks monthly is solidly convinced of its merits. Owner L. M. Standley lists these big advantages over other paper containers: (1) cuts labor costs by 50% and packaging material costs by 67%; capital outlay for 75-unit per minute Tetra Pak machine approximately 33% of comparable units; storage of packaging material was reduced 86%; the compact machine proved uncomplicated to operate with minimum down-time.

Let a specialist from Crown Zellerbach (manufacturer of Tetra Pak paper) show you the way to production economies as well as Tetra Pak merchandising and marketing data. Write Department TK-4 at below address for complete details.

CROWN ZELLERBACH CORPORATION
343 SANSOME STREET, SAN FRANCISCO, CALIFORNIA

CARNATION MAKES MILK MAGIC

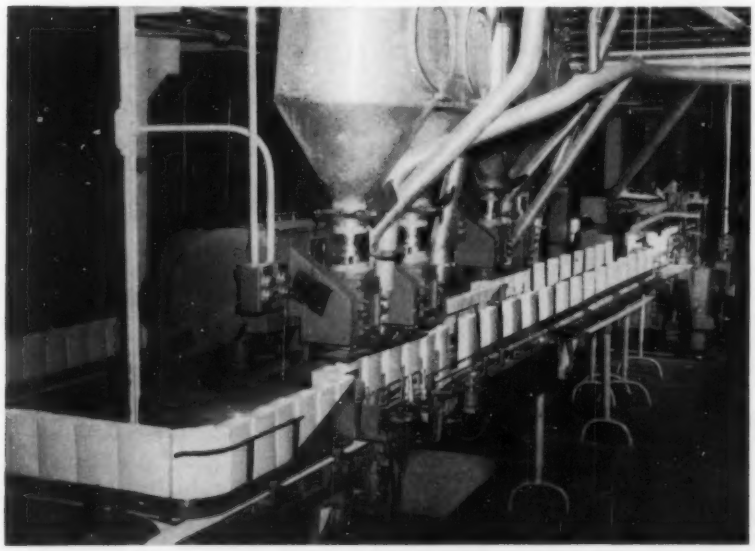
• New instant crystals packaged on Pneumatic equipment

The latest type of nonfat dry milk bears, naturally enough, one of the greatest and most progressive names in milk and allied products of this day and age — Carnation.

Carnation's long time slogan "from contented cows" now includes its new magic crystals that produce delicious nonfat milk instantly — when added to water. Pour, stir and serve — that's all there is to it.

Carnation's packaging of its new product is made easy, efficient and economical by its use of Pneumatic carton forming, filling and sealing equipment. Like countless other leading volume producers of packaged products Carnation uses Pneumatic machines in the highly important packaging function.

Pneumatic's "lower cost per container" operation repeats itself in plant after plant because it is an inevitable result of sounder design, more advanced engineering and a type of precision construction that has never been perfected to the same high degree by other machine makers.



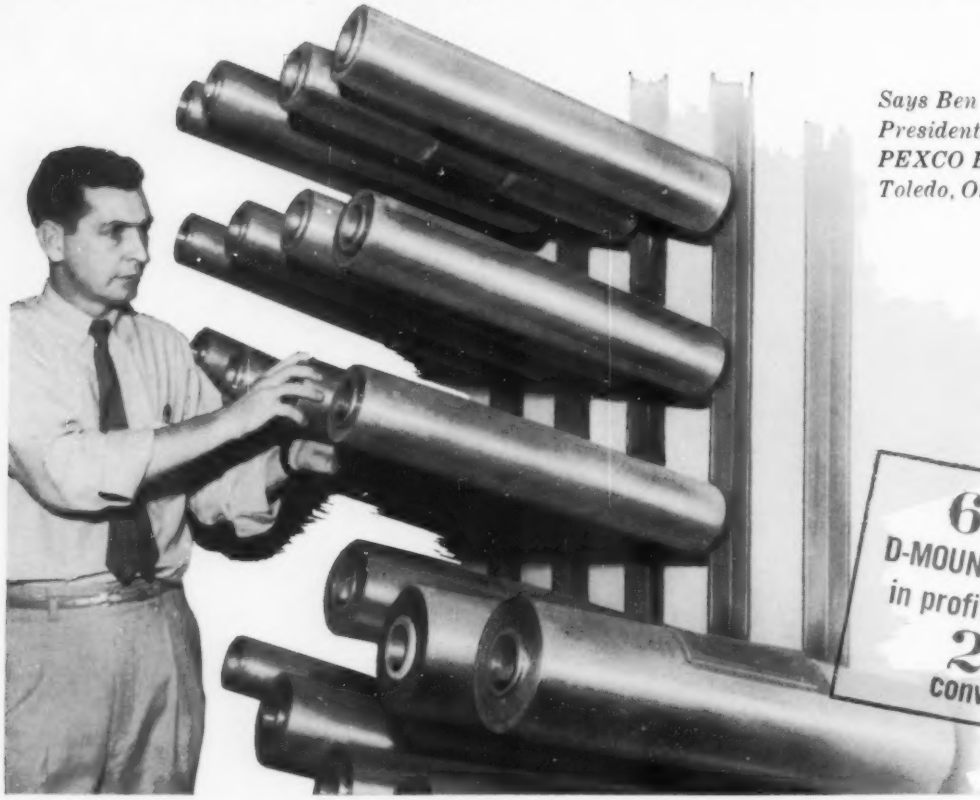
Weighing and top closing operations of fully automatic packaging line in Carnation's plant at Oconomowoc, Wisconsin.

With the present day emphasis on greater production efficiency as a means to better profits, many plants are taking a new and more critical look at their packaging and bottling, to weed out costly obsolescence. There's almost always a better way with Pneumatic equipment.

PNEUMATIC SCALE CORP., LTD.,
82 Newport Ave., Quincy 71, Mass.
Also: New York; Chicago; Dallas; San Francisco; Los Angeles; Seattle; Leeds, England. Canadian Division: Delamere & Williams Company, Ltd., Toronto.

PNEUMATIC

"We like D-MOUNT® Cylinders because they save us money!"



Says Ben R. Brown
President
PEXCO BAG MFG. CO.,
Toledo, Ohio

6873
D-MOUNT CYLINDERS
in profitable use by
238
converters

"Furthermore," reports Mr. Brown, "D-MOUNT Cylinders are easier to handle and simpler to store than one-piece steel cylinders. Also their light weight means we can run at faster speeds and still get good print quality."

Write for literature

MOSSTYPE®

MOSSTYPE and "D-MOUNT" are registered trademarks.

MOSSTYPE 150 Franklin Turnpike, Waldwick, N. J.

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U.S.I. POLYETHYLENE NEWS

A series for plastics and packaging executives by the makers of PETROTHENE® polyethylene resins

JUNE/JULY 1960

Packaging Notes

New Surface Treatment for Polyethylene uses fluorine to make poly bottles and containers substantially impermeable to gases and volatile chemicals. The fluorination process, described in a recent patent, may make possible polyethylene packaging of such items as liquid cosmetics, aromatic solvents, oils and aerosol formulations.

The fluorination process is claimed to be simple and economical. Film or bottles, washed free of foreign matter, are brought in contact with pure fluorine or a fluorine gas mixture at room temperature or at up to 50°C. In a typical test, loss of a volatile liquid was claimed to be reduced from 5.67% in an untreated bottle to .05% in a fluorinated bottle over the same period of time. In another test, treated film transferred less than a sixth as much oxygen as untreated film. Other properties of polyethylene are said to be unchanged by the process.

Tear Tape Opening for polyethylene coated package is being used by one manufacturer. Product is packaged in a poly-coated aluminum foil pouch with a 3-lb. cotton thread applied as part of the extruded poly coating. It is believed that this method may be used with equal success on packages of unsupported polyethylene film.

Two New Appointments Announced by U.S.I.

John K. Moffett, Jr.

William H. Rader

John K. Moffett, Jr. has been appointed Assistant Manager of PETROTHENE® Polyethylene Sales. Mr. Moffett has been employed by U.S.I. since 1948 in various production and sales capacities, and has served recently in a sales development position for PETROTHENE resins.

William H. Rader has been made Assistant Production Manager for PETROTHENE resins. As Senior Development Engineer Mr. Rader has been in charge of polyethylene development operations at U.S.I's Tuscola plant.

Film Can Be Drawn Down To Less Than 1/4 Mil With New Medium Density Petrothene® Resin

Provides Added Safety Margin at Commercial Film Thicknesses

Super-thin (0.2 mil) blown film of PETROTHENE 239-27 is so light it virtually floats in air.

U.S.I. has introduced a new medium density polyethylene resin that makes possible extrusion of film in thicknesses as low as 0.2 mil. While few commercial uses exist for film of this gauge, the new resin offers a greater margin of flexibility during extrusion at conventional thicknesses such as 0.4-0.5 mil.

The new resin, called PETROTHENE 239-27, has a density of 0.929, placing it in the medium density polyethylene range. Film made from it has increased stiffness, with excellent gloss and clarity. This high clarity, and the ease with which low thickness film can be extruded, is expected to make the resin of particular value in thin film applications such as drycleaner garment bags.

Stiffness Makes for Easier Handling

The new resin brings an added advantage to the manufacture of garment bags:

Film extruded from it has a high degree of stiffness and has less tendency to cling to garments. In soft goods packaging, this added stiffness makes for easier handling on the packaging line. Packages and bags made with the lighter gauge film are also easier to tear open.

Extruders may obtain specifications and other technical data on PETROTHENE 239-27 resin by writing to PETROTHENE Polyethylene Dept., U. S. Industrial Chemicals Co., 99 Park Avenue, New York 16, N. Y.

Group Begins Second Year Of Plastic Pipe Promotion

The Plastic Pipe Research Council recently outlined the second-year plan for its NSF (National Sanitation Foundation) plastic pipe program.

Cornerstone of the Council's promotion is a research and information program which includes producing slide films, placing informative articles in leading consumer and industrial publications and a brochure entitled, "Safe Transportation of Drinking Water — Your Key to Public Health." The promotional campaign is aimed at persons and organizations who buy, specify or permit the use of plastic pipe approved for transmission of drinking water. It is supported by a group of pipe manufacturers and raw materials suppliers, including U.S.I.

Booklet on Resin Quality in Housewares is Offered

A 24-page illustrated booklet containing tips for plastic housewares buyers is now available from U.S.I. The booklet, "The Goose That Laid the Golden Egg," emphasizes the importance of resin quality and good production practices in maintaining the market for polyethylene housewares. It points out what guides to judging quality are available to the buyer. Copies of the booklet are available to polyethylene molders for distribution to their customers. Write Editor, U.S.I. POLYETHYLENE NEWS, 99 Park Avenue, New York 16, N. Y.

Extrusion Coaters Report Large Increase In Facilities

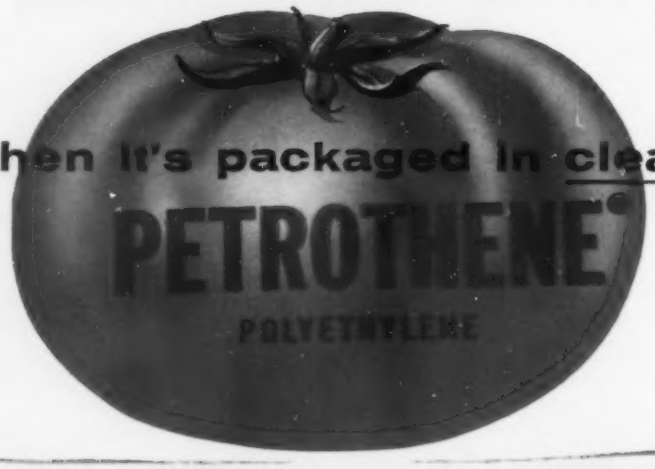
The number of extrusion coating machines in the U. S. has risen to approximately 45, according to a recent report by the Polyethylene Extrusion Coaters Group of the Specialty Paper and Board Affiliates.

The large increase over the number of facilities available three or four years ago can be attributed to rapid growth of uses for polyethylene coated paper, board, film and foil in the food, dairy and industrial packaging industries, and increasing consumer acceptance of polyethylene coated containers.

DO YOU HAVE a new polyethylene packaging development you'd like the industry to know about? Make it routine to send your information on new developments to U.S.I. POLYETHYLENE NEWS.

Address the Editor,
U.S.I. POLYETHYLENE NEWS, U. S. Industrial Chemicals Co., Division of National Distillers and Chemical Corp., 99 Park Avenue, New York 16, N. Y.

VISIBILITY UNLIMITED



● Blown film from regular production run using a PETROTHENE Polyethylene resin. Film is 1 mil thick—Other films may be drawn down to as low as 0.2 mil.

MAKE THIS SIMPLE TEST

Hold up a film made from U.S.I. PETROTHENE Polyethylene and look at any distant object through it. Then do the same with any other polyethylene film of similar thickness. This simple test will demonstrate the outstanding transparency of film made from PETROTHENE polyethylene resins.

U.S.I. INDUSTRIAL CHEMICALS CO.
Division of National Distillers and Chemical Corp.
99 Park Ave., New York 16, N. Y.
Branches in principal cities

Film made with PETROTHENE® Resins has these clear advantages

Eye Appeal — Clear polyethylene films made from PETROTHENE resins show your product "live" — let its quality speak for itself. These new films offer the toughness and low cost of polyethylene, plus clarity and gloss in the same range as other transparent packaging materials.

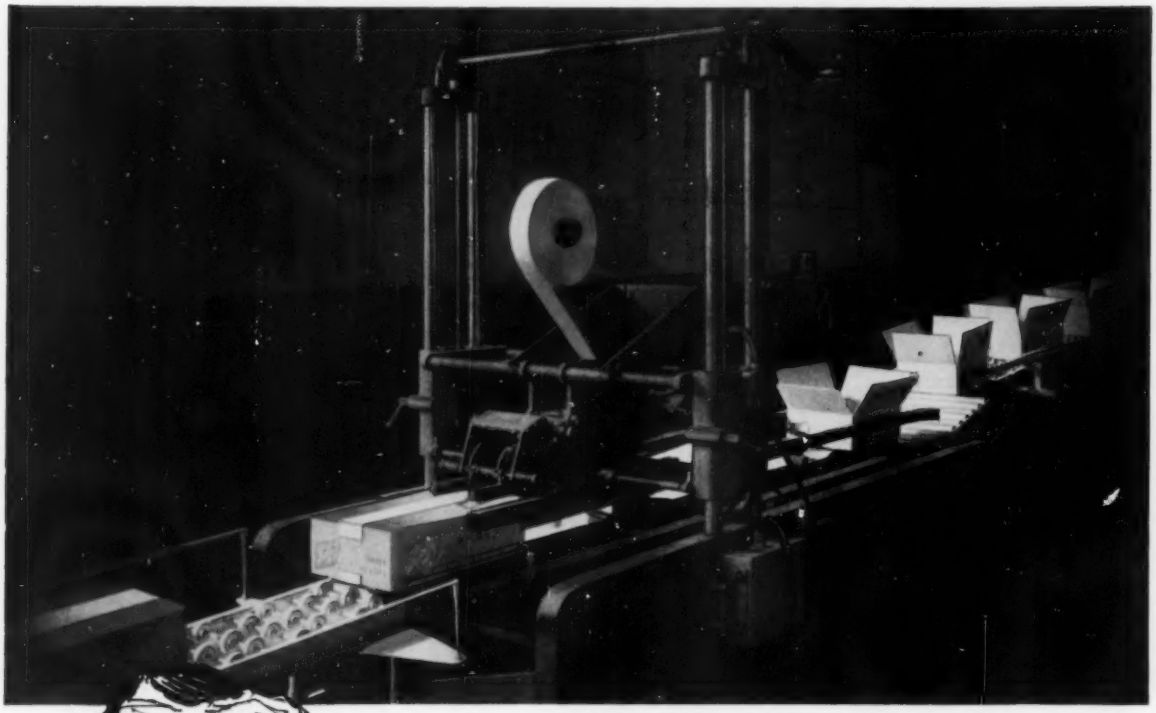
Toughness — the unusually good impact strength of PETROTHENE-made film makes it ideal for food and produce packaging. What's more, the combination of clarity plus toughness offered by PETROTHENE resins permits you to use low cost polyethylene film for a whole new range of packaging applications.

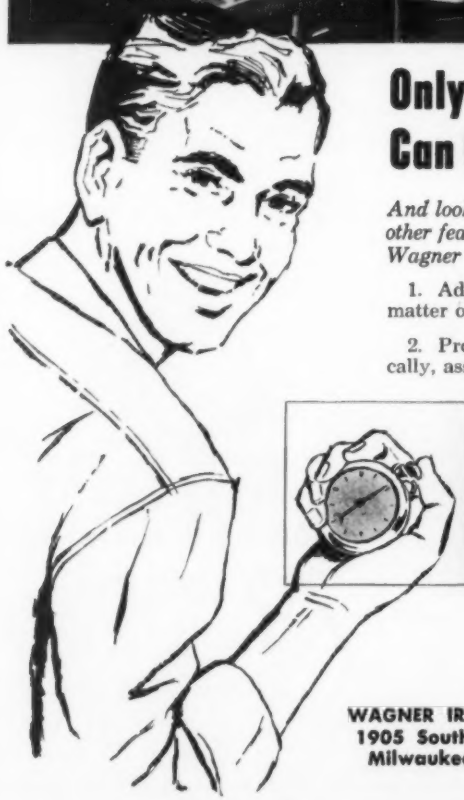
Versatility — Clarity in polyethylene film usually is obtained at a sacrifice in toughness. While this also holds true of PETROTHENE resins, the clarity/toughness ratio of film made from PETROTHENE resins is higher than that of conventional polyethylenes. For example, at the same level of toughness, PETROTHENE resins offer a higher degree of clarity; at equal clarity, PETROTHENE resins have more toughness. This enables you to specify film with a wider range of useful packaging properties.

U.S.I. makes a broad line of PETROTHENE Polyethylene Resins especially suited for packaging film applications. Check with your film supplier for information on new developments in clear polyethylene film.

Only Machine that Automatically Tapes Over 2000 New or Re-use Cartons Per Hour

...and reduces labor costs as much as 80%, too!





Only the WAGNER M-20 Can Guarantee Performance Like That

And look at just a few of the other features built into every Wagner M20—

1. Adjusts to any carton size in a matter of seconds, not minutes.

2. Proper tape length cut automatically, assures neat cartons every time.

3. Exclusive wipe down and compression assembly.

4. Rugged construction assures many years of trouble-free service.

It will pay you well to get complete information about the most modern taping machine on the market today.

waqner M-20 TAPING MACHINE

MAIL COUPON TODAY FOR FULL INFORMATION

WAGNER IRON WORKS
1905 South 1st Street
Milwaukee, Wisconsin

WAGNER IRON WORKS
Milwaukee 1, Wisconsin

Please send complete information about the Wagner M-20 Taping Machine

NAME .....

ADDRESS .....

CITY .....

ARABOL SPECIFICATION ADHESIVES

For adhesive strength and moisture-resistance

The convenient "six-pack" increases the unit of purchase – but the manufacturer's selling job does not stop at the check-out counter. The adhesive used in the forming of the package has to withstand rough handling – and often contact with water – before the product is consumed. Adhesives must be *specified* for these conditions, if the product is to be fully accepted. The adhesive must also perform in high-speed automatic equipment – efficiently and economically.

Strength and moisture-resistance are probably factors in your operations.

ARABOL Adhesives are specification-formulated for dozens of other requirements–in the making, packaging, labeling and shipping of the products of industry. *Specification* adhesives – to meet each of your requirements – cost little more (and sometimes less) than run-of-mill adhesives.

We invite the opportunity to submit formulated samples – for tests to be made in your own plant – under your own particular working conditions. That is the one kind of testing that assures you of satisfactory results.

Our fourteen plants and warehouses – plus four laboratories – are your assurance of service and delivery. It is our privilege to serve the leaders, as well as hundreds of small users. May we send you a helpful booklet listing 23 basic specifications for adhesives? Kindly address your inquiry to Department 97.

ARABOL

73 YEARS OF PIONEERING IN THE MAKING OF ADHESIVES

THE **ARABOL** MFG. CO. . . . *a nationwide organization serving major users of industrial adhesives*
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BOSTON • PORTLAND, Ore. • ITASCA and McALLEN, Tex. • CINCINNATI • DENVER • TAMPA • LONDON, Eng.

Here's the ink you've been waiting for

NEW

BBD Speed-E-Brite

A superior new-type flexographic ink for all popular flexible packaging materials

For use with natural or synthetic rubber plates

Look at the quality advantages you get with SPEED-E-BRITE INK

- **Better** Printability
- **Higher** Gloss
- **Better** Block-Resistance
- **Stronger** Color
- **Better** Water-Resistance
- **More** Versatility
- **Longer** Mileage
- **Better** Scuff-Resistance

plus

- **Built-in** Speed Control

Now, BBD brings you the latest development in modern inkmaking—SPEED-E-BRITE, most advanced flexographic ink on the market.

SPEED-E-BRITE is a glossier, richer, cleaner-printing ink than you have ever used . . . with an extremely low viscosity for markedly improved press stability and running qualities. And it goes further than ordinary inks because its extra high color strength gives you up to 30% more area coverage per pound.

SPEED-E-BRITE is truly versatile. You can use it on *polyethylene* (treated) . . . *"Mylar" and other polyester films . . . plain, moistureproof, "Saran"- and polymer-coated cellophanes . . . aluminum foil and glassine.* You can use it with plates or rollers of either natural or synthetic rubber. And its unique multi-speed feature enables you to use it on both high-speed presses and slower equipment . . . get uniformly excellent printing anywhere within a 100 to 500 fpm. running range.

Why not let BBD show you how new SPEED-E-BRITE INK can improve your printing quality and production efficiency, while reducing the need for keeping large ink inventories. Contact BBD today.

For printed samples and more information about SPEED-E-BRITE INK, contact your nearest BBD office . . . or write direct to
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Sun Chemical's Graphic Arts Group: GENERAL PRINTING INK *Gravure, Letterpress, Offset Inks and Supplies* GEO. H. MORRILL *Newspaper Inks*
BENSING BROS. AND DEENEY *Flexographic Inks* RUTHERFORD MACHINERY *Lithographic Equipment*

At the Cellophane Products Corporation plant in Providence — certified 6 hour 20 minute run was 35 *rolls* of MSD-53 cellophane in 28¼" width, 3100 lbs., three colors.

A finished roll every 11 minutes!

A Kidder Filmprinter prints, slits, splices in one continuous operation . . . while producing the highest quality of printing in excellent register and accurate sheet length, and with the very minimum of waste!

And Kidder, through their Performance Engineers, guarantees that you get these results. They set up your Filmprinter in your plant, check it for maximum operating efficiency, stay with your pressmen until they are fully educated to get this production from the press.

Who else does this? — Nobody but Kidder!

Kidder Press Company, Inc., Dover, N. H. Eastern Sales Office: Empire State Bldg., New York 1, N. Y. Mid-West Sales Office: 400 Washington Bldg., Madison 3, Wis. West Coast Representative: Bojanower Machinery Service Corp., 5270 E. Washington Blvd., Los Angeles 22, California.

Make Good Impressions Faster with

Kidder

Flexoprinter,® Letterpress, and Gravure Presses, Slitters and Rewinders

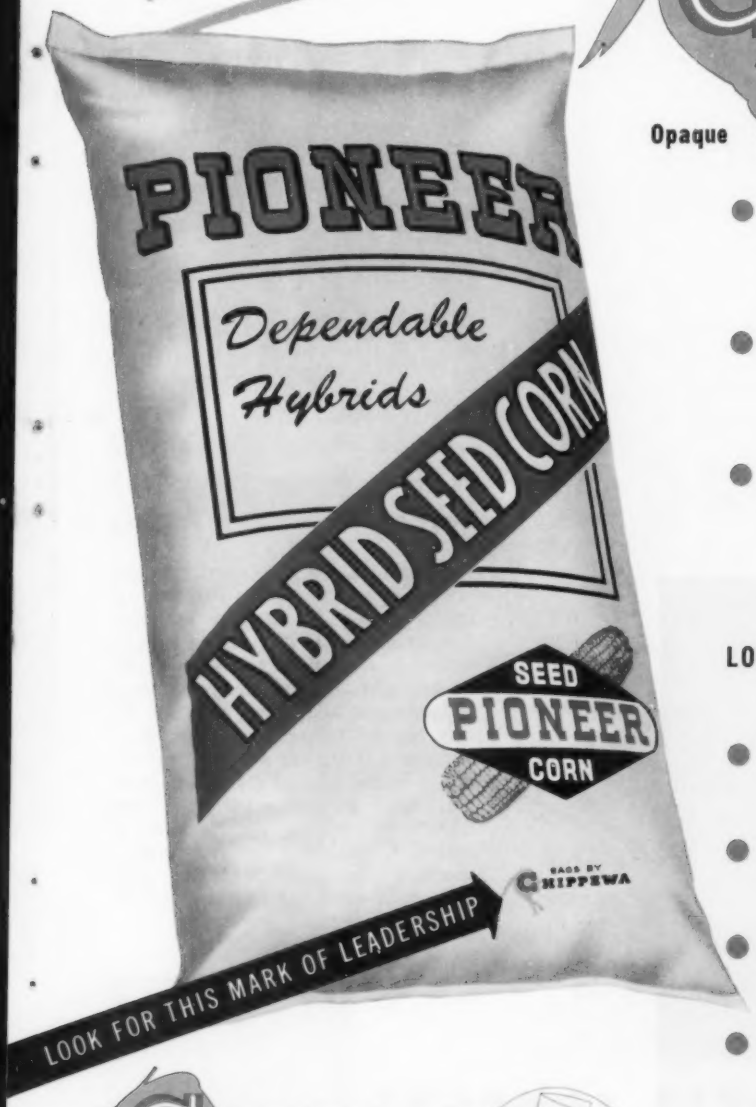
FOR ACCELERATED SALES . . .

Insist on . . . BAGS BY

CHIPPEWA

Leaders in Polyethylene Packaging

Opaque **Transparent** **Translucent**



- **Completely waterproof**
- **Tough**
- **Dominant display**

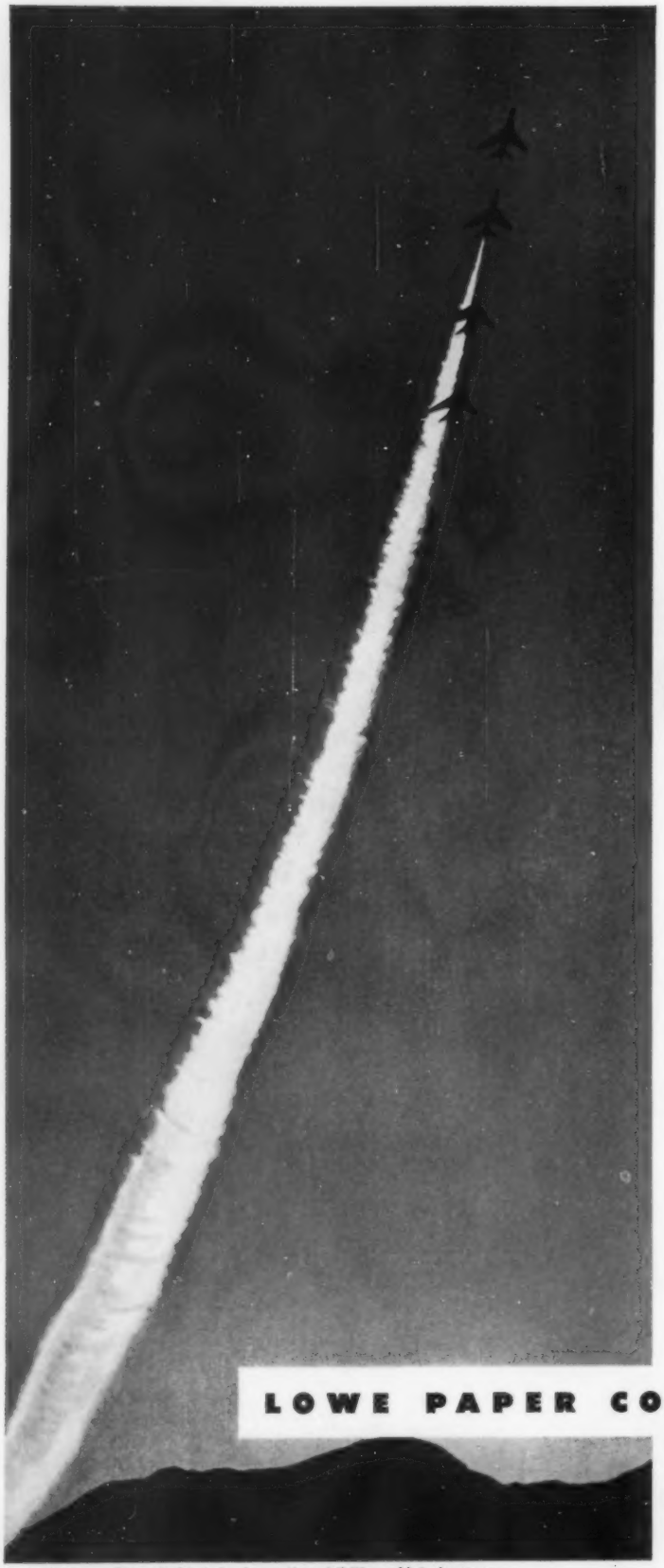
LOOK AT THESE CHIPPEWA FEATURES

- Available 18″ to 30″ widths; 26″ to 60″ lengths
- Printed one to four colors
- Open mouth or valve type
- Dependable water-tight seal
- Adapts to standard filling equipment
- Easy stacking — superior for pallet handling

CHIPPEWA PLASTICS, INC.

CHIPPEWA FALLS • WISCONSIN

Write . . . wire . . . or phone for information about your specific packaging problems.



U. S. Air Force Thunderbirds in dramatic exhibition of jet air power.

DRAMATIC is the word for

No. 90 ULTRAGLOSS

Glazed Finish Boxboard With New and Better Ink Reception and Printing

If you are looking for something to give dramatic distinction to cartons, you will find it in No. 90 Ultragloss! No other boxboard matches its dazzlingly glossy finish, its clean-lined folding and embossing qualities. Now greatly improved in ink setting and drying qualities, the new No. 90 Ultragloss is available in weights suitable for cartons, folders, match books, menus, charts, and numerous other advertising and utility items ... in smart pastel colors as well as white. Write today for free sample sheets, in the desired thickness ... light enough for a tiny tag– heavy enough for a beverage carton.

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An Independent Mill–
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World's fastest hand labeling

Labels by Steigerwald

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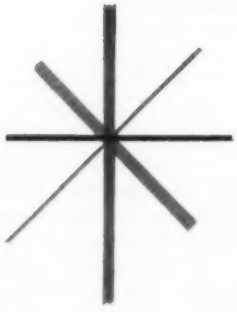

No glue, no water, no lost time with Sensi-Stick, our special pressure-sensitive labels. Permanent or removable, individual or in rolls.

Send us your labels for redesign, without charge or obligation; or ask for our estimate on printing your present labels. Telephone, wire or write to any representative below or to A. M. Steigerwald Co., 910 West Van Buren, Chicago 7. Tel. TAylor 9-5400.

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Victor 2-6580

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J. E. & J. L. Moor
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Taylor 4-5309

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Blackhawk Paper & Cordage
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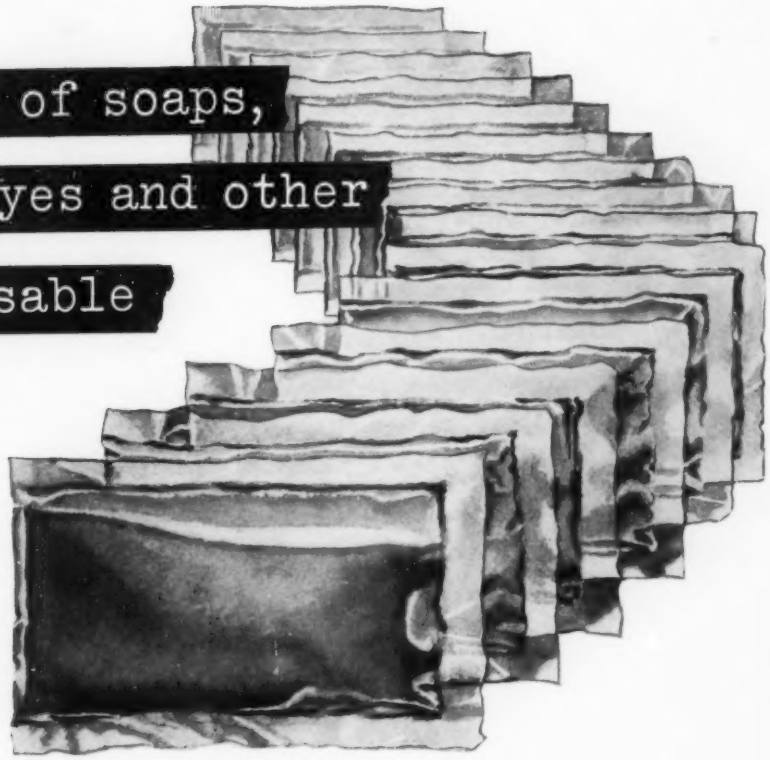
To every manufacturer of soaps, detergents, dyes and other water dispensable products:



Mono-Sol's **water-soluble** Packaging Film is **heat-sealable** on a Production Basis!

● Yes, *Mono-Sol's* revolutionary 100% water-soluble Polyvinyl Alcohol Film can be used on most standard package filling and heat-sealing machines with only slight modification. This means that when you package with Mono-Sol PVA Film, you employ a material *specially made* to meet *all* your needs.

Just think of all the sales points Mono-Sol PVA Film provides you!

It's 100% water-soluble. The user simply drops the package into cool or hot water, stirs and presto! It completely dissolves, releasing its contents into the solution.

It's ideal for powders, solids, many liquids.

It's the world's *easiest* dispenser. Yet provides *exact* control of quantity.

It's unusually strong and has excellent contact clarity.

It's impermeable to *oxygen* and many other gases. Resistant to oil, aromatic and petroleum solvents.

It's very stable. Will not crack in low humidities; will not melt in high humidities.

For sample bags and technical data, simply send us this coupon clipped to your letterhead.

JUST A FEW OF THE PRODUCTS SUITABLE FOR MONO-SOL PVA FILM PACKAGING ARE:

- Soaps
- Bleaches
- Insecticides
- Sodium Bicarbonate
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- Sodium Hyposulphate
- Detergents
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- Oils
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MONO-SOL CORPORATION
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MONO-SOL CORPORATION
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Please send us bag samples and full technical data.
We are interested in Mono-Sol PVA Film for packaging_____

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PROTECTIVE PACKAGING...with the *basic*

New "K" cellophanes provide superior vapor barrier...retain flavors, offer extra durability with brilliant transparency

People like to see what they buy. That's why it's smart to start with transparency in package planning. Crystal-clear Du Pont cellophane lets your product's personality sell for itself... and Du Pont's over 100 varieties of cellophane, led by the extra protective "K" types, can give you the correct protection your product requires. Too, cellophane offers you excellent printability, efficient high-speed production.

Du Pont has 34 years' experience developing and producing transparent films. Let this experience help you to a better package. See your Du Pont Representative or your Du Pont Authorized Converter. E. I. du Pont de Nemours & Co. (Inc.), Film Dept., Wilmington 98, Del.

sales power of pure transparency

DU PONT
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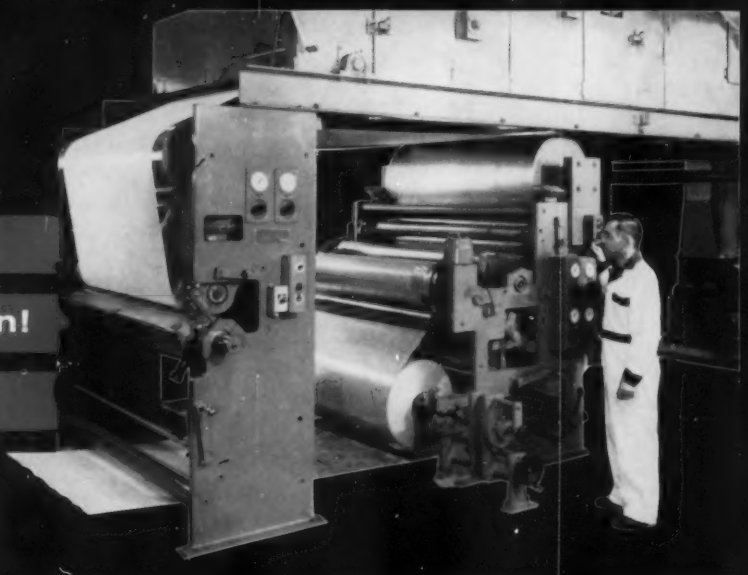
BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

DU PONT cellophane

MERCURY MACHINES—PACE SETTERS FOR THE FOLDING CARTON INDUSTRY

SINCE 1933

A Symbol of fine CRAFTSMANSHIP



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High-Profit Production!

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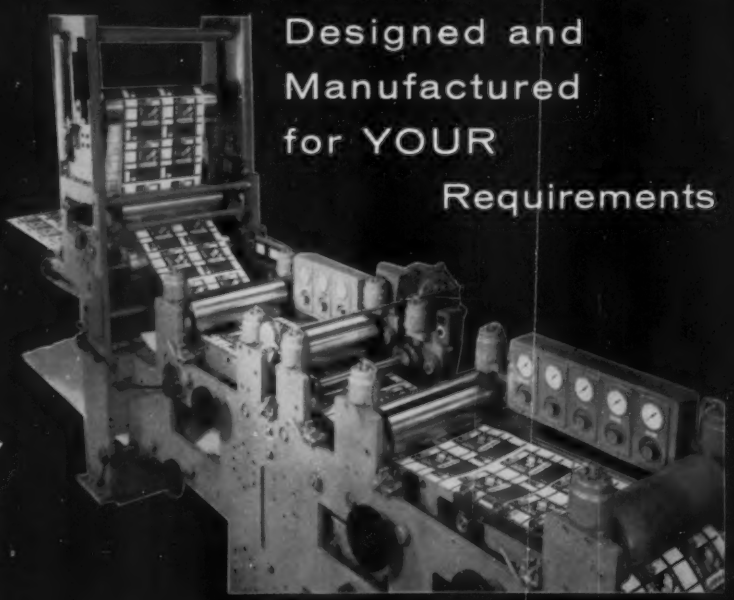

Designed and Manufactured for YOUR Requirements

These standard Mercury Laminators are doing a better job . . . all day, every day . . . year in, year out . . . than has ever been done before.

May we get together?

MERCURY Engineering Corporation 1933 25th year 1958

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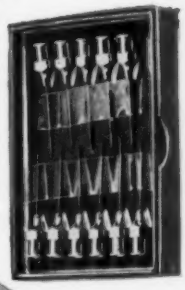
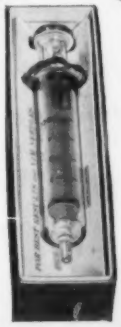
Profit Producing Machinery for Paper Converters

ROWELL BOXES

High in quality... production to meet your need



Set-up boxes in a wide range, made for Cosmetic & Drug Trade throughout the United States. Inquiries also invited from box users in other lines.



E. N. Rowell Co. INC.

BATAVIA, NEW YORK

There's no secret about the success of R.O. seals in the closure field. The fact that these efficient, trouble-free metal caps are *rolled on*—and thus form a made-to-measure fit on individual bottles or jars—is known to many manufacturers, and these users increase year by year. Consider R.O. for *your* glass containers. They are made in a wide range of sizes and in three types—*Plain* for ordinary needs, *Pilferproof* with a tell-tale ring that reveals tampering, and SecuRO for perfect security and opening, with threaded removable ring. Your design or message can be printed in any colour scheme —write for samples and prices now.

PLAIN, PILFERPROOF OR SECURO

R.O. seals

METAL CLOSURES LTD · WEST BROMWICH · STAFFS
ENGLAND

Giant POLYETHYLENE SHOWBAGS

PRINTED OR PLAIN

Low in cost because they're automatically made in one piece

ONE-PIECE POLYETHYLENE COVER ON 12 FT. SELF-SERVICE MEAT CASE

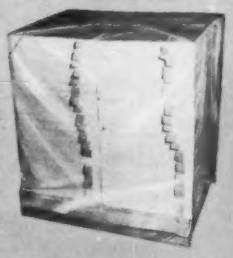
TYPICAL USES

MAJOR APPLIANCES machinery . . . farm equipment

VENDING MACHINES building material . . . automobiles

DESKS filing cabinets . . . office furniture

PRINTING PAPER other stock-piles

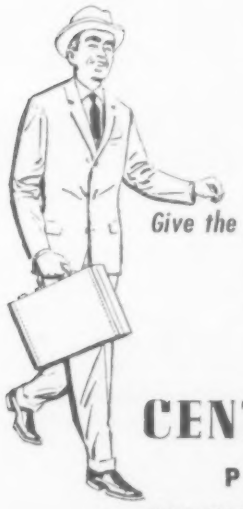


FURNITURE . . . carpets . . . mattresses . . . textiles . . . TV consoles . . . record players . . . radios

What's your BIG packaging problem?

Moisture-proof, dust-proof, polyethylene Showbags are now automatically made, giving you low cost protection for big, bulky products. Eliminate tedious hand wrapping—Giant Showbags save up to 80% of your packaging cost.

Printed in one or more colors . . . Showbags advertise, display and help sell your product.



Give the problem to your **CENTRAL STATESMAN**

He is a packaging counselor, whose "portfolio" is better packaging—designed to give you increased protection, lower material and labor costs, improved appearance and better sales.

CENTRAL STATES
PAPER & BAG CO.

5221 NATURAL BRIDGE ST. LOUIS 15, MO.

A PACKAGING TEAM NEEDS

The package can determine the success of a product. And so important has the packaging factor become that more and more companies are making packaging decisions through *teamwork.* Specialists from various departments offer their know-how and experience. But to make a packaging team complete, it needs an outside viewpoint.

It needs an Anchor Man. The Anchor Man is a glass packaging expert who has helped solve hundreds of packaging problems and who can help solve yours through this wide experience. And if you should need it, your Anchor Man can bring you the help of Anchor Hocking's extensive Package Engineering and Research Division.

AN ANCHOR MAN!

Contact your Anchor Man soon. We know you'll like his quality-controlled Anchorglass® containers, dependable Anchor® closures and sealing machines. We know you'll like his service. We know you'll want him on your team, too. Anchor Hocking Glass Corporation, Lancaster, Ohio. Branch offices in all principal cities.

ANCHOR HOCKING

Glass Containers and Closures

FOR THE COMPETITIVE EDGE IN PACKAGING...

A·C·T

ALUMINUM CONSULTING TEAM

SELL-OUT SUCCESS: When Cudahy Packing Co. put its quality "Bar S" Holiday Hams in to this stand-out wrap of Kaiser Aluminum Foil, the product's initial West-coast marketing was a sell-out success! Moisture-holding foil prevents weight loss . . . protects right-off-the-woodfire flavor. Foil's competitive edge in convenience—to cook, carve, serve and store in the original wrap—keeps customers coming back.

Introducing a new Kaiser Aluminum service for packagers to help you cut costs and increase sales with aluminum

The Aluminum Consulting Team has been set up by Kaiser Aluminum to help designers and users of packaging benefit *now* from this outstanding fact:

In the past dozen years of its growth as an industry, aluminum has brought new competitive advantages to more products in more industries than any other metal in the world.

In the packaging industry, we have seen new competitive advantages achieved again and again . . . in hundreds of examples like the four shown above.

Kaiser Aluminum, through A·C·T, is ready now to help you use aluminum foil and aluminum rigid containers to develop new competitive advantages through cost savings, sales appeal and greater package efficiency.

HERE'S HOW A·C·T IS ORGANIZED

A·C·T is composed of six major groups of specialists within Kaiser Aluminum. Depending on the nature of the problem, the appropriate group assumes project leadership and calls upon the other groups for specialized information.

Package Development Specialists help you re-engineer and re-design present packaging to take advantage of the competitive edge offered by the properties of aluminum. These specialists can also help you open markets for new products by helping to create *new* aluminum packaging—with complete testing and evaluation in Kaiser Aluminum's ultra-modern packaging laboratory.

Package Design Specialists offer complete styling service to bring design artistry to the functional engineering created by package development specialists—to increase sales appeal by improving package appearance.

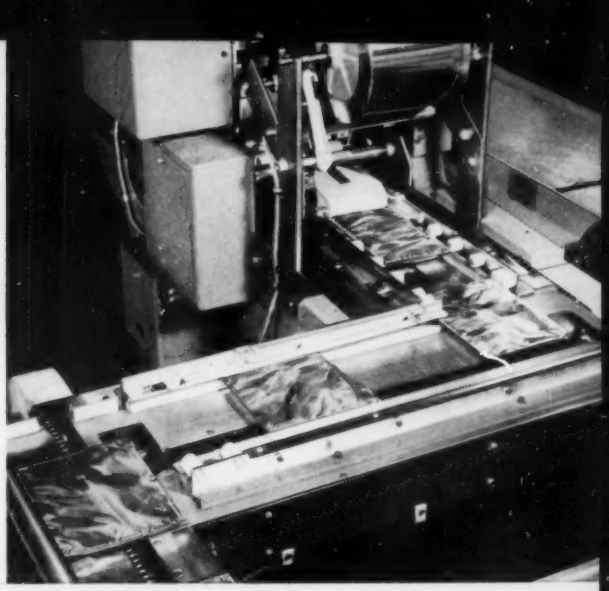
Process Development Specialists help work out new techniques and improved processes for aluminum packaging—in coating, printing, laminating, joining, stamping, forming, container closing. They also help develop completely new processes for new needs in packaging production.

Packaging Equipment Specialists bring maximum efficiency to production line operation . . . introducing labor and material economies to existing equipment set-ups . . . or assisting in the set-up of completely new packaging lines.

Research Scientists and Food Technologists determine ideal "foil combinations" (foil in combination with other packaging materials) for specific products under conditions of actual use. Their procedures assure

NEW PACKAGE DEVELOPMENTS! Kaiser Aluminum's new "cripple-proof rim" container designs are helping bakers turn old problems into new advantages! First, they eliminate the sharp finger-cutting edge of ordinary rigid foil containers. Second, they permit tighter crimping of covers, resulting in stronger sealing and fewer returns of packages "crippled" during storage, shipping or display.

700% SALES INCREASE! That's the *immediate gain* recorded by Modern Bakeries when they switched to wraps of Kaiser Aluminum Foil for their Country Club Bermuda Rye Bread! The bread also gained two days of shelf life, and stores increased shelf space and provided special display racks to take full advantage of the bread's competitive sales success.



FASTER PACKAGING, LOWER COST! To overcome slow and costly hand closing operations, A·C·T specialists helped develop the automatic "Foilcrimp" Machine. Using it, packers of frozen prepared foods can now apply flexible foil top sheets to open-top containers at the rate of 60 per minute! The savings? . . . up to 85 per cent on labor, up to 25 per cent on material, or up to ½ cent per container. In addition, the closures are more secure, protect food better.

maximum protection plus *perfect* compatibility of product and package.

Market Evaluation Specialists help designers and users of aluminum packaging determine sales potential for new products and new packaging applications.

HOW A·C·T GOES TO WORK WITH YOU

First of all, give A·C·T your requirements. Include enough particulars to permit us to determine which specialists within A·C·T can best serve you.

As the next step, A·C·T will study these particulars . . . then submit a recommendation that may help you gain outstanding competitive advantages! *Although Kaiser Aluminum does not produce packaging we will gladly furnish you the names of converters experienced in manufacturing foil products.*

You can take immediate advantage of A·C·T service by writing on your letterhead to A·C·T, Kaiser Aluminum & Chemical Sales, Inc., 919 N. Michigan Ave., Chicago 11, Illinois. Or, call the Kaiser Aluminum sales office listed in your telephone directory. Ask for "the man on A·C·T."

Mail in the coupon below for your free copy of the informative booklet, "A·C·T—How It Can Help You Reduce Costs And Increase Sales With Aluminum Packaging." Kaiser Aluminum & Chemical Sales, Inc., *Executive Office,* Kaiser Bldg., Oakland 12, Calif.; *General Sales Office,* Palmolive Bldg., Chicago 11, Ill.

Mail this coupon for your free A·C·T booklet

A·C·T
Kaiser Aluminum & Chemical Sales, Inc.
919 N. Michigan Avenue, Chicago 11, Illinois

ACT
ALUMINUM CONSULTING TEAM

Please send me a free copy of the booklet, "A·C·T—How It Can Help You Reduce Costs And Increase Sales With Aluminum Packaging." I understand there is no obligation.

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COMPANY_____

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M-2

For the competitive edge in packaging, go aluminum-

KAISER ALUMINUM

Producers of Kaiser Household Foils . . . the only foils "quilted" for extra strength

SEE "MAVERICK" • SUNDAY EVENINGS, ABC-TV NETWORK • CONSULT YOUR LOCAL TV LISTING

A packager is *most* responsive to a supplier's advertisement when he's actively searching for packaging "ways and means."

. . . AND THAT'S JUST WHAT HE USES HIS MODERN PACKAGING ENCYCLOPEDIA* FOR!

* It's time now to reserve advertising space in the next edition (to be published in November) that 22,000 packagers—all *paid* subscribers—will be using as their standard ready-reference manual for *twelve full months* after it gets into their hands.

For more details write to Advertising Director, MODERN PACKAGING, 575 Madison Avenue, New York 22, N. Y.

Gamblers Don't Gamble.....

At Las Vegas new dice come in sealed Clearsite plastic packages. There is no gamble on the product arriving "factory fresh". • If your product can be packaged in a vial or jar, you would be wise "not to gamble" on packaging—get in touch with Celluplastic. • Celluplastic can give you off the shelf delivery from the widest assortment of stock plastic jars and vials available anywhere. All Clearsite containers are shatter-proof, moisture-tight, dust-free, chemically inert. They are easy to label or can be multi-color printed in our own printing department. Tell us what you want to package and we'll send you free samples and literature. Write Dept. AA.

PLASTIC VIALS AND JARS *that Sell!*

Clearsite

CELLUPLASTIC CORPORATION

SALES AND EXECUTIVE OFFICES • NEWARK 5, NEW JERSEY

Illustrated packages are formed from Campco sheet by Plastofilm, Inc. (Wheaton, Illinois)

why do these Plastofilm packages made of **CAMPCO** *acetate have extra clarity?*

A special non-blushing formulation in CAMPCO acetate enables the material to maintain its crystal clarity during forming – *prevents* clouding and discoloration. That's why these products show up so well – and why they sell so well!

CAMPCO acetate *protects* products from handling damage too. It's not only transparent but is exceptionally strong, even in the thinner gauges. Take the can opener package, as an example. The customer reports "adoption of the new package has resulted in an appreciable increase in sales, and notably fewer rejects due to shipping and handling damage."

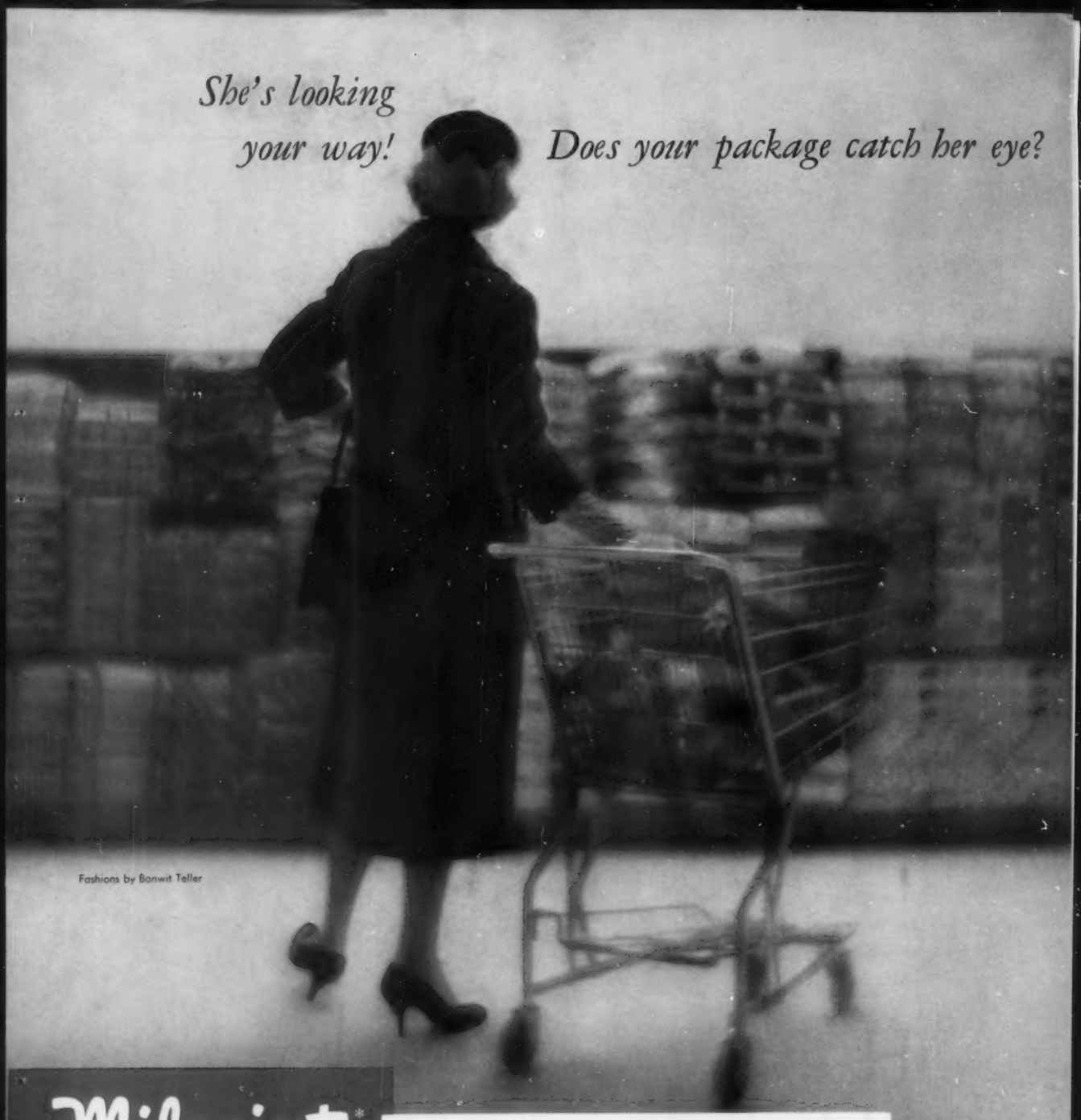
Perhaps other CAMPCO sheet or film is more suitable to your requirements. You may prefer CAMPCO butyrate for its extreme strength and pliability. It can be deep-formed, patterned and hole punched without shattering or cracking. And, if you combine CAMPCO acetate or butyrate with *liners* or *package bottoms* made of easy-to-print-on CAMPCO styrene, for example, you create a highly effective merchandiser.

Whatever your requirements, CAMPCO is your most complete source of plastic sheet and film—acetate, butyrate, styrene or other plastic materials. While we do no custom fabricating, we can recommend a source of fabrication in your area. And we can suggest ways for you to adapt your designs . . . especially to take advantage of the economy of CAMPCO *stock* rolls and sheets. These come in a wide variety of sizes and gauges. For complete details, write:

CAMPCO *sheet and film*

a division of **Chicago Molded Products Corp.**
2708 Normandy Avenue, Chicago 35, Illinois

STYRENE • ACETATE • POLYETHYLENE •
RIGID POLYETHYLENE • BUTYRATE • COPOLYMER STYRENE



Milprint*

makes packaging that makes sales

Give your next package the benefits of Milprint's unmatched facilities and more than fifty years' experience in making packaging that makes sales! It pays to call your Milprint man — *first!*

Milprint Inc.

*Reg. U. S. Pat. Off.

General Offices, Milwaukee, Wisconsin • Sales Offices in Principal Cities

Printed Cellophane, Pliofilm, Polyethylene, Saran, Acetate, Glassine, Vitafilm, "Mylar"®, Foils, Laminations, Folding Cartons, Bags, Lithographed Displays, Printed Promotional Material

This insert lithographed by MILPRINT

Broomfield House, Southgate

Three hundred and fifty years ago King James I of England is said to have used this beautiful country mansion 10 miles from London as a hunting-lodge.

Though now part of London it still stands, perfectly preserved and in daily use as a local museum. Its situation is the centre of a 54 acre park that bears its name, not far from John Dale's factory where quality containers of all kinds are manufactured

Our wide range of containers—metal and plastic—provide for every type of product as the many famous firms that use them already know.

JOHN DALE LTD

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New Southgate, London N.11
Telephone: Enterprise 1272

Toronto, Canada
Telephone: Lennox 6-2117

REACH, PODNER!

This is the moment of decision when the "reach appeal" of your carton is put to the test.

Gardner's creative department can design a more arresting carton for you. One with colorful eye and appetite appeal that'll make shoppers reach for your product.

For more information on dairy product custom packaging, check your Gardner sales representative. Ask him about Gardner stock designs, too.

Whatever your volume or plant location—you'll find Gardner service outstanding.

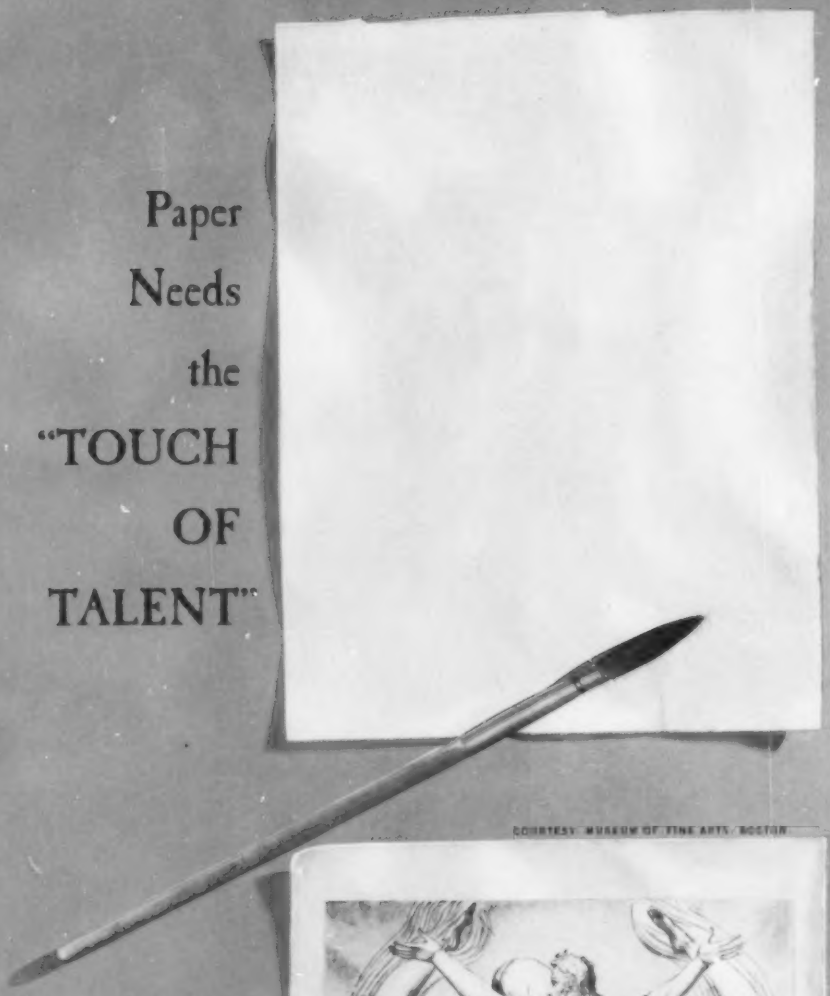
Persuasive Packaging

DIAMOND GARDNER CORPORA

diamond gardner

THE GARDNER DIVISION
DIVISION OFFICES: Middletown, Ohio

Paper Needs the "TOUCH OF TALENT"



COURTESY MUSEUM OF FINE ARTS, BOSTON

In the beginning of the 19th century the art of paper making had reached a high degree of perfection in England . . .

But it took the "Touch of Talent" of a William Blake, in 1808, to transform a sheet of paper into this museum piece.

It is talent above all other things, that creates a masterpiece from a piece of paper . . . whether it is designed for a museum, or a specific commercial purpose.

NASHUA Corporation

NASHUA

NASHUA PACKAGING TALENTS AVAILABLE TO YOU . . . Creative Design • Paper Chemistry • Package Engineering • Coordinated Packaging • Quality Production • Procurement Versatility . . . Nashua Corporation, Nashua, N. H.

MODERN PACKAGING

June 1958

Featured in this issue . . .

How many sides sell a package?

In the competition for ever more powerful front panels as "silent salesmen," many packagers are overlooking the increasing exposure now being given to the other five surfaces—back, sides, top and bottom—of a package on retailers' shelves and in consumers' homes. Lost sales are the natural result of ineffective design treatment on these "off facings." A study recently completed by Jewel Tea Co. indicates the need for a new concept of the identity problem. If a product is not to be overlooked amid today's tremendous and increasing variety, package panels which face the customer in the store must give as quick recognition to brand and contents as does the front panel. In home cupboards, fast recognition stimulated by properly designed off facings can move a product off the shelf and onto the stove in jig time, promoting repeat purchases. For the details on the hidden sales potentials of non-facing panel design,

Don't miss "The Forgotten Side," p. 87

Economical protection—two-ply pouch of polyethylene film and glassine

The twin appeals of consumer convenience and economy of packaging materials suggest wide application by other packagers of a novel method of two-ply pouch making right on the packaging line, now being used by General Mills for its Betty Crocker Muffin Mixes. In an automatic in-line operation, the mixes are packed into twin protective pouches of spot-attached and heat-sealed polyethylene film and glassine plies, and then inserted into cartons fed from a magazine. Reported to have long shelf life, the two-pouch carton has the obvious merchandising advantage of letting the housewife use just one pouch at a time, preserving the other one for later use. Combining the polyethylene and glassine on the packaging line and heat sealing them together at seam areas, sides and top, enables General Mills to use inexpensive, functional materials in a pouch that is stronger and less costly than one made from a single prelaminated web of the same materials.

See "Two-Ply Pouch Forming," p. 94

Adhesives: essence of today's dramatic packaging

New developments in packaging are constantly making headlines. But rarely is proper credit given to the anonymous performers behind these advances—the adhesives that hold packages together. Adhesives are responsible for the spectacular development of boilable cook-in-bag packages, skin packs, blister packs, laminated film and foil combinations . . . in fact, almost any package you can name. And, in a big way, adhesives with rapid-setting formulations and new application techniques are becoming a deciding factor in the operation of sleek new packaging machines at faster speeds in less floor space. To find out more about the history and prospects of a package-supplying industry that has contributed in full measure to the advancement of packaging technology at infinitesimal cost,

Read this month's Supplier-Industry Survey, "Adhesives," p. 98

When is a polyethylene bottle not a squeeze bottle?

In a pioneering application, John H. Breck Co. is using thin-walled, high-density polyethylene bottles and jars as quality packages for its Banish liquid shampoo—without regard to the heretofore limited "squeeze" functions. On this basis, it marks the introduction of the lightweight, blow-molded plastic container as a distinct packaging medium beside traditional glass, metal and other materials. Breck's action comes as a result of its convictions that the protective properties and design possibilities of high-density polyethylene already are feasible for a premium package and that this type of container soon will be competing on a favorable price basis. The easy-to-handle, unbreakable, white-

pigmented bottles and jars save up to 47% in filled-package weight, for an obvious reduction in shipping charges (which helps Breck negate the initial higher cost of the plastic containers). ***Get the details in "High-Density Containers," p. 92***

New cellophanes preserve meat bloom, cut packaging costs 12%

Nearly half of the $5½ billion worth of fresh meats sold annually in the U.S. is prepackaged. So the development of three new types of coated cellophane designed especially for fresh meats is significant to many packagers. The films—two of them employ nitrocellulose coatings, the third is coated with a very thin extrusion of polyethylene—create savings of 12% in packaging costs. Equally important, they virtually eliminate such sales-killing problems as: (1) meat discoloration induced by oxygen absence, (2) moisture loss resulting in lower net weights and meat discoloration through dehydration and (3) weak or ruptured packages caused by the meat's fat content degrading the film coating, reducing dimensional stability and clarity and wrinkling of the wrap.

Turn to "Special Films for Fresh Meats," p. 106

A successful investment in consumer and retailer research

Six months' study and extensive market research have given A. Stein & Co. a package for its Paris brand belts that rates high in appeal and convenience with both dealer and customer. Sales volume of the product in its new transparent polystyrene-domed folding carton is well ahead of last year and the rate of opening of new retail accounts is the highest in the company's history—proving once again that a good package has more in it than just the product. Among the conveniences that win approval from retailer and consumer alike is the removable dome, which permits closer inspection and can be replaced without damage to the carton—a feature that was lacking in the former package. For the full story of this successful redesign, ***Turn to "Visibility Plus," p. 118***

How to unsnarl a tangle of trademarks

Just four years ago Wilson & Co., big Chicago-based meat packer, was using for its 2,000 products 13 different trademarks in a variety of packaging designs sponsored by 15 autonomous department managers for use on innumerable packages ordered to suit the individual specifications of local plants. This consumer-confusing situation obviously didn't square with changing market conditions, in which design unity and corporate identity were (and are) key factors. So the company embarked on a thorough trademark-and-packaging-overhaul program. Now nearing completion, the fruits of this action are company-wide package unification and a single distinctive trademark to replace the 13 former symbols. ***See "For 2,000 Products: a Single Trademark," p. 126***

Bright prospects for low-permeability halofluorocarbon plastics

Halofluorocarbon plastics currently available in the form of tubing, film and molded shapes appear to be the answer to packagers' long need for a transparent, heat-sealable material with ultra-low permeability to moisture and oxygen. Thermoplastic film and tubing fabricated from these plastics combine virtually zero water and oxygen permeability with optical clarity and easy-sealing qualities. In addition, there are such bonus features as flexibility, toughness, printability and great resistance to aging as well as to high and low temperature extremes. Of special interest to the pharmaceutical industry is the fact that halofluorocarbon resins are available which can be sterilized by autoclaving and radiation without distortion or loss of properties. A technical report by Richard A. Smith, Julian H. Kushnick and Herman S. Kaufman.

Read "Halofluorocarbon Plastics," p. 131

Better industrial packaging through polyurethane foam

At GE's Power Tube Dept., a special molded polyurethane foam cradling cushion in a corrugated shipping case offers complete protection to delicate magnetron power tubes. Of significance to all industrial packagers are these facts: The new foam reduces shipper weight, cuts cubage and slices 30% off the company's packaging bill compared with its former method. Wide packaging possibilities are foreseen for polyurethane foam because it can be molded—as in the GE application—or sprayed directly in place on a paper-wrapped product. The latter method could have striking impact on the packaging of furniture, instruments and other fragile or bulky objects.

Read about it in "Foam Cradle for Fragile Products," p. 114

June 1958
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MODERN PACKAGING

Side panels of food cartons and backs of jars and cans too often give housewife little informative help in meal planning and may fail to encourage repeat sales. Even some winners in 1958 Folding Box Competition (lower shelf) are not well marked—note the stack of four "anonymous" instant-pudding cartons.

THE FORGOTTEN SIDE

Jewel Tea study brings to light the hidden sales potentials of non-facing panel design that packagers may be missing in the race for ever more powerful front-panel exposure

How many sales are being lost because of ineffective design treatment of the sides, tops and bottoms of today's packages?

This question is raised by a study of what's needed in "off facings" just completed by the Jewel Tea Co. It is reiterated in comments by prominent research organizations and leading home economists, as well as retail organizations.

In the struggle for front panels that are powerful silent salesmen, many packagers seemingly are overlooking the increasing exposure given to the other five surfaces of a package on the retail store shelf and in the home of the consumer.

In the retailing space squeeze, the average supermarket handles between 5,000 and 15,000 different items, so there is no longer assurance that all grocery packages are given front facings.

And in the home cupboard or refrigerator, the

Candid views of typical kitchen shelves

In home cabinets, packages show varying degrees of recognition, indicating the importance of brand and product identification on sides, bottoms or backs of containers. These unposed kitchen photos by MODERN PACKAGING illustrate the findings of Jewel Tea in its study of "off facings."

consumer invariably stores packages sidewise, endwise or any other way that saves limited space.

This calls for a new concept of the identity problem. If a product is not to be overlooked amidst the tremendous variety that increases daily, sides, tops and bottoms of packages facing the customer in the store must give as quick recognition to brand and contents as does the face of the package. On the home shelf, quick recognition by proper design of "off facings" can be an important influence on use and, consequently, on repeat sales. A consumer is much more likely, it is reasoned, to reach with greater frequency for a product in a package whose contents and brand are instantly identifiable. For instance, if on her shelf she has a choice between several cake mixes or cereals, she is more apt to reach first for the package that tells her quickest what she is looking for or has greatest meal-planning appeal. This problem of identity on the home shelf obviously is quite different from the deliberate minimizing of brand recognition for packages that go to the table (see "The Non-Commercial Look," MODERN PACKAGING, Nov., 1957, p. 111).

Having already completed a study of in-store buying habits showing that the homemaker's selections are oriented to meal planning rather than motivated by impulse from department to department, Jewel Tea Co. wanted to find out if packaging could stimulate meal planning at home.

The importance of "off facings" was significantly indicated by this latter study in which the company assigned its home-office route men to view and photograph its customers' actual home-storage conditions.

The study made under the direction of Nick Hoye,

End result on the supermarket shelf today. Any one of the six panels of a package on the retail shelf may face the shopper: front or back, one side or one end. There is no assurance that packages will be placed face front as the manufacturer plans. Even unmarked ends of cylindrical containers (middle shelf, right) may be faced out to make better use of shelf space.

head of Jewel's packaging committee, produced the following conclusions:

1. *Product, brand identity.* Product identity on side panels is more important than brand identity. The brand has been sold. The housewife wants to select the exact product from her shelf. However, better "off-face" brand impact should lead to better repeat sales for the brand.

2. *Menus and recipes.* Good pictorial and typographic design promoting new recipes and menus will prompt the customer to use the product sooner than she planned. Menu-related foods could be promoted where a company has a broad line of items. Emphasis of this on side panels should stimulate greater use in the home.

3. *Family designs.* Identification between similar and family-design packages should be sharp on all faces of the packages. Spices and other products need identity on top as well as front and sides.

4. *Environmental compatibility.* Household cleansers and some other items stand alone on home shelves. They should identify themselves with their use and look pleasing from any side.

5. *Cartons.* Side panels almost always face the homemaker and so should be designed to emphasize product and brand identity.

6. *Cans.* Repetition of product identity, preferably near the top of the label, would make it easier to distinguish contents of soup and other cans.

7. *Bottles.* Distinctive mold shapes often identify bottled goods, although the identity of some products might be strengthened with neck or wrap-around labels that repeat product and brand names, as is common practice on instant-coffee containers.

8. *Frozen foods.* Packages in this category are less in need of stepped-up, off-face identity, as frozen-food packagers generally have paid more attention to side-panel labeling because retailers store frozen-food packages on their sides in cabinets.

Most in need of improvement, perhaps, are the sides of folding cartons, invariably put on the home shelf with a side panel facing the homemaker. Side panels need cleaning up if they have become catch-alls for ingredient listings, opening directions, food analyses, routine recipe presentations, premium offers or instructions for product use. Brand names may be carried, but they often lack impact on side panels. And even more essential is strengthened product identity to signal contents.

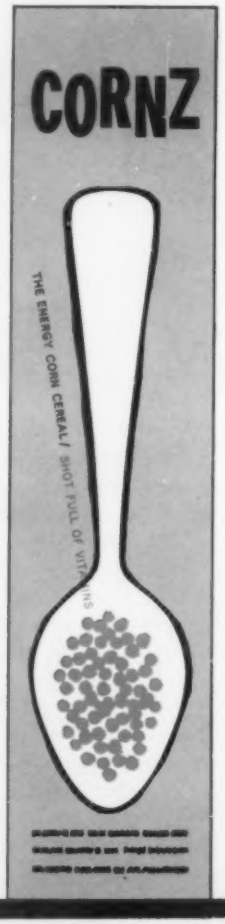
The importance of side-panel identity is pointed up by Roy Roberts, vice president of the Chicago Home Arts Guild, an independent package and product testing organization. Says he, side panels do not carry enough sales talk to demonstrate product benefits. The sides of the package that the consumer sees daily in the kitchen cupboard need as strong emphasis on product and brand identity as the front face.

Speaking from the home-economist's viewpoint,

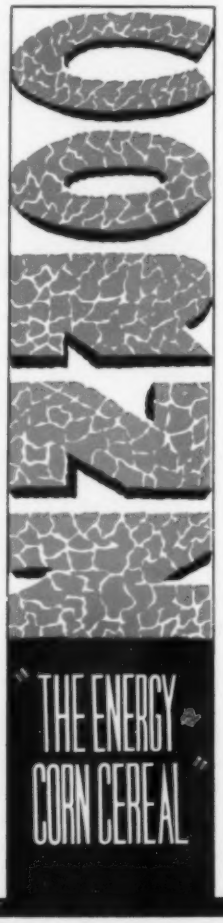
Narrow side panels can be designed for impact

Four sketches for end panels of cartons to package a hypothetical cereal product were created by four different Midwest designers at MODERN PACKAGING's request. Specifications were simple and brief: a Cornz cereal carton side panel in black and orange. The cereal itself is the size of BB bullets, orange in color, and promoted with two advertising slogans: "The energy corn cereal" and "Shot full of vitamins."

Appetite-appeal illustration is comfortably contained in this narrow panel that pictures the BB-sized cereal in use. It suggests that no surface area is too small to achieve an effective design treatment. *Design, Robert Sidney Dickens.*



Symbolic spoon has copy arranged to carry the eye directly to the cereal product. Type block at the bottom of this panel permits additional ingredient or sell copy. *Design, Morton Goldsholl Design Associates.*



Three-panel repetition is intended for this lettering design. Basically a side panel, it can also be used as the center panel of front face, surrounded by appetite-appeal and promotional copy. *Design, Lea-Tek Studio.*

Crisp design is highlighted by bold initial. Used on both sides, this design is suggested to give unmistakable product identity no matter which panel faces out. *Design, Penson/Tuttle.*

Ruth Bonde, chairman of Northwestern University's home economics department, maintains that adequate product identification requires that packages bear appropriate labeling so that the purchaser can recognize the product instantly in the store and on the home shelf. She notes that for greater efficiency, each panel of a package needs this information in full view because of limited shelf space in store and home that often makes it necessary to place packages in other than face-out positions. Some shelving even requires positioning of packages so that only bottom surfaces are visible. (For example, the stacking of flour bags in supermarkets.)

Because retailers today place their packages according to product movement and shelf-space limitations, Marie Kiefer, secretary-manager of the huge National Assn. of Retail Grocers, suggests that packagers and designers submit their packages to retailers to obtain buying-level reaction before making a final design decision.

With the average retailer carrying thousands of different items, something has to give, she says. Packages that take up too much shelf facing may cause discontinuance of part or all of a line. This, apparently, is already happening with certain products marketed in a number of different colors that require too much space to display the whole array.

The trend to wider front-panel facings may defeat itself, she believes, citing one ironing compound that has virtually gone off the market because retailers have refused to stock new packages with 1½-in.-wider front panels, designed to hog more shelf space.

And back-of-store operations also should not be overlooked when considering the problem of shelf facings. In the drug trade, Eli Lilly & Co., Indianapolis, finds that drugs on the prescription pharmacist's shelf are being squeezed as much as are over-the-counter products out front. To remedy this situation, this company side labels its bottles to give as good identification to narrower side surfaces as is provided on the wide front face. Thus more bottles may be placed sideways per linear foot with the same product and brand information in full view.

To demonstrate how the narrow side panels can be designed to strengthen product and brand identity along with other essential selling data, MODERN PACKAGING posed a hypothetical design problem to several of the Midwest's leading package designers. Their solutions, presented on facing p. 90, demonstrate what might be done with a package for a mythical cereal called "Cornz," incorporating the advertising slogans, "The energy corn cereal," and "Shot full of vitamins." Some show how dramatic poster effects can be achieved even when working in mandatory and essential information.

Obviously, the problem of improved side-panel design does not apply to all packagers. Many effective treatments of all six sides of a package can be found. The work already done indicates that alert packagers are aware of the trends in retailing and consumer habits of storing packages in the home that make quick recognition an essential for all package surfaces. Chances are these packages are better equipped to weather marketing competition.

Frozen-food identification on sides has become standard practice because most retailers and housewives arrange packages in refrigerators and freezers with this panel facing up or out.

Side labeling as well as front-face identification is used regularly at Eli Lilly & Co. to save linear shelf space both at the wholesale drug level and in the retail prescription room.

PHOTO ELI LILLY & CO.

High-density containers

Breck's no-squeeze polyethylene bottles and jars for shampoo at last launch blow-molded plastics as a packaging medium with no other function than conveying product

47% weight saving is reported for filled blow-molded jars of a new high-density polyethylene. Tapered shape indicates design versatility. Gold-colored, foil-laminated carton maintains family identity with other Breck hair preparations.

Adoption of thin-walled, high-density polyethylene bottles and jars by the John H. Breck Co., Springfield, Mass., for shampoos directs the attention of all packagers to the potentials of the blow-molded plastic container entirely independent of its familiar and heretofore limited "squeeze" functions.

Breck has selected these containers as quality packages without regard to any other function than holding and conveying the product. On this basis, the lightweight, blow-molded plastic container is on its own for the first time to make a place for itself as a distinct packaging medium beside glass, metal and other materials.

And while the present obvious advantage is weight saving, Breck is pushing ahead in plastics with the conviction that in the not too far-distant future these containers will be competing with others on a favorable price basis.

Through its own testing and that of the supplier of the container, Breck is convinced that the protective properties and design possibilities of high-density polyethylene already are feasible for a premium package.

The containers reportedly have sufficient rigidity for easy handling, yet they chalk up weight savings of 37 to 47% on the filled packages in comparison with similar glass containers.

The thin-walled plastic bottle is made of a new polyethylene resin of 0.945 density and is 92% lighter than similar empty glass bottles. Produced

in a 16-oz. size for Breck's Banish, a liquid shampoo containing an anti-dandruff ingredient, the bottle is intended for professional beauty-shop use and will not be sold in retail outlets.

This tall, cylindrical and white-pigmented bottle is printed by a dry offset technique in three colors. It is distributed in shipping cartons containing two 4-bottle units that also include plastic pour caps and measuring cylinders for use by beauticians.

The jar, on the other hand, is a retail item and is being used to introduce a new cream version of the Banish shampoo in five selected test-market areas. Molded of a polyethylene of 0.960 density, this 6-oz. container weighs about 90% less than a comparable opal-glass jar. The tapered white container presents a completely new and sales-stimulating appearance with its custom-colored cap, designed to match the pink product. The quality effect is enhanced by acetate-laminated-paper labels, front and back. The jar is enclosed in a gold-colored, foil-laminated folding carton to maintain family identity with other similarly packaged items in the company's hair-dressing line.

Despite advantages, these pioneering containers face two marketing hurdles, the company points out. One is price, because the unfilled plastic containers cost about twice as much as do glass packages. Even allowing for shipping savings, the plastic container still costs 20% more.

The other, and more significant hurdle, according to Edward J. Breck, president of the well-known hair-preparation house that has packaged products in regular polyethylene since 1949, is the need to establish plastics generally as quality packaging materials in the minds of consumers.

When polled in market tests, he reports, a significant majority of women request products in plastic containers, yet they buy glass rather than plastic when they shop. They are not yet convinced of the prestige and functional qualities of the plastic package, he believes.

Containers made of high-density polyethylene may well change this picture and enable such plastic packages to transcend the present useful—but limited—squeeze applications.

For the shampoo containers, high-density polyethylene was picked because of its light weight, design versatility, ease of molding, its acceptable degree of dimensional stability and its chemical and thermal resistance. Reportedly, the material also provides a satisfactory barrier against transmission of perfume essence and water vapor. Tests show that the high-density material will reduce liquid permeation 50 to 85% in contrast to regular polyethylene.

In a company test, during which containers were cycled between 35 and 100 deg. F. for 28 days, polyethylene jars containing the cream Banish lost an insignificant 0.15% of their net weight.

Reduction of shipping cost, which normally accounts for as much as 9% of total cost on toiletries, is the main economy that helps cut down the initial high cost of the plastic containers.

Weighing only 0.8 oz. apiece, the plastic bottles are packed eight to a case. The glass bottles, on the other hand, weigh 10.5 oz. and each case contains a dozen. Three cases of the filled plastic bottles, therefore, weigh 33 lbs. in contrast to 45 lbs. for two cases of bottles.

PHOTO PLAX CORP.

Functional bottles made of another high-density polyethylene resin contain Banish shampoo for use by professional hairdressers. Pour fitments (bottle, left) and graduated measuring cylinders accompany each four-bottle carton.

The plastic jar weighs about 0.6 oz., while a comparable glass jar weighs 6.4 oz. Since both containers are packed 14 to a case, the net saving with the plastic is about 5 lbs. per case.

Translating these figures into dollars is a little more difficult, since ship- [*Continued on page 184*]

SUPPLIES AND SERVICES: *Both containers blow molded by Plax Corp., Hartford, Conn, using Hercules Powder Co. "Hi-fax" polyethylene for bottles and Phillips Chemical Co. "Marlex-50" polyethylene for jars. Jar caps by Mack Molding Co., Wayne, N. J. Bottle caps by Colt's Plastics Co., Inc., Hartford, Conn. Dispenser caps by Custom Plastics, Inc., Chicopee, Mass. Labels by National Label Co., 19 St. & Indiana Ave., Philadelphia 32. Carton by Warner Bros. Co., Bridgeport 1, Conn.*

Two-ply

Twin pouches in each box of new Betty Crocker Muffin Mix give housewife a choice of using entire contents or half. Two-ply polyethylene film and glassine pouches provide moisture and odor protection, greaseproofness and strength. Promotion and recipes are printed on each 7-oz. pouch.

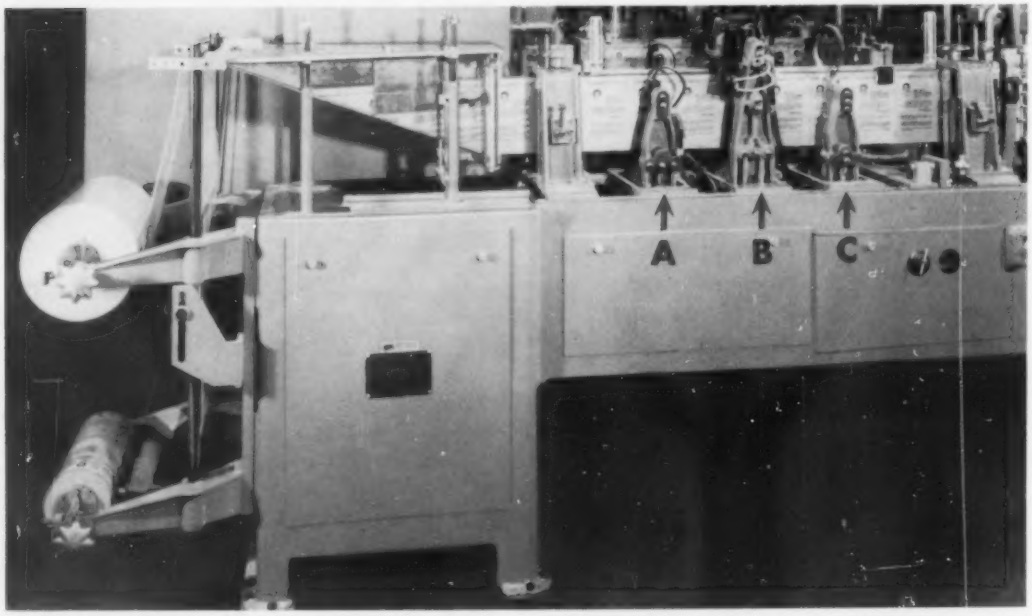
Unique twin-pouch packages used for new Betty Crocker Muffin Mixes offer appealing convenience to the consumer and suggest wide applications to packagers in a novel method of two-ply pouch-making right on the packaging line.

The mixes, offered in a choice of four flavors, are packed in twin pouches of spot-attached and heat-sealed polyethylene film and a laminated glassine. The two-pouch carton has the merchandising advantage of giving the housewife the option of using just one pouch without risking deterioration of the remainder because of inadequate product protection.

The polyethylene-glassine combination reportedly provides a long shelf life for a product initially packaged with a 7-9% flour moisture content.

Each pouch carries 7 oz. of one of the four mixes —orange, raisin bran, corn and date—cartoned in four-color-printed boxes.

The stiff glassine, a lamination of two plies of glassine with a center of wax, provides moisture protection, greaseproofness and odor protection, while



Two webs of material are fed from left through special threading and tensioning devices over V-plow to form bottom of pouch. Two sets of feed rollers move combined polyethylene film and glassine to pre-heat bars (A) and heat bars (B) with special tacking heads that simultaneously make vertical side seals and bond polyethylene to glassine at the seams only. After the combined polyethylene-glassine material passes through the cooling bars (C), an electric-eye beam triggers cut-off knives that separate the pouches into individual units.

pouch forming

Webs of polyethylene film and glassine are combined automatically to form new Betty Crocker mix pouches that are filled, sealed and cartoned economically in one continuous operation

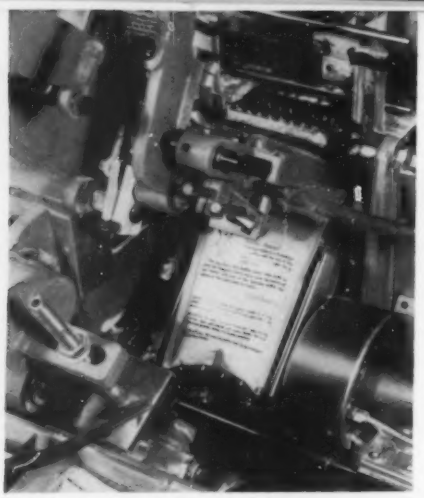
Modification of conventional filling operations provides reciprocating arms (below filler heads) that dip into pouches and pull them open at twin filling stations. Pouch receives half a charge at each filler and is then top heat sealed. Machine in foreground is one of two integrated units that make up one muffin-mix packaging line. A vacuum arm (in front of left operator) transfers sealed pouches from front filling line to a bucket conveyor where operator inserts special-offer coupons. Pouches from parallel line (rear) travel to bucket conveyor at a point immediately after coupon insertion.

the limp polyethylene inner lining lends impact strength and resistence to pouch rupture.

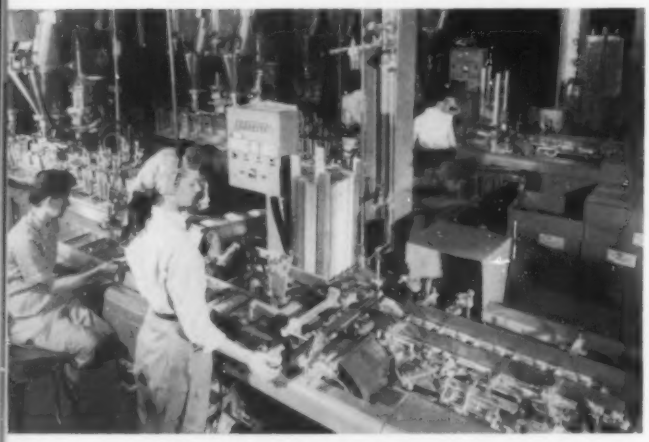
Most significant is the fact that General Mills is using an in-line operation to form, fill, seal and carton the two-ply pouches on special equipment newly designed to do the job at its Toledo plant.

The package was developed mutually by General Mills' Packaging Research Dept., headed by Clarence E. Felt, and the machinery supplier. It illustrates the benefits that come from close cooperation between the packager and the machinery manufacturer working together to solve a packaging problem. Existing similar units of the same machinery-supplier's equipment cannot be converted to do the combining job without rebuilding major sections of the machines.

The two materials are combined on the packaging line by feeding a web of 1½-mil polyethylene and a web of two-color-printed, 52-lb., bleached, laminated glassine over a forming plow and heat sealing them together at the seam areas only, the two sides and top. This effects a much stronger package than a lamination of the two same materials and enables General Mills to use inexpensive, functional materials in a pouch that is less costly than one made from a single prelaminated web of the same materials. Also, by sealing the materials together at only the sides and top, the pouch has



Check weigher on one of the lines automatically rejects underweight pouches only. An upper vacuum transfer arm moves pouches from the filling line into a check-weigh cradle (above). A second vacuum transfer arm (lower left) completes pouch movement to the bucket conveyor.



Automatic cartoning inserts twin pouches into cartons fed from magazine in front of standing operator.

Manual check weigher (foreground) is operated on the lines for quality control and all cartons pass through metal detector on way to a common semi-automatic caser (background).

greater internal structural strength because the inner polyethylene ply does not transfer stress directly to the glassine, as would be so with a lamination.

Initially, General Mills used only one glassine web stock for all four flavors. It is now changing to an individual web for each one that will carry baking directions on the back of the pouch recipes for that particular flavor on the front.

General Mills has its muffin-mix lines operating at peak schedules in its Toledo plant. A line consists of two integrated machines, each unit fitted with two-station fillers that turn out 58-60 pouches a minute. Two pouches at a time are fed automatically into a cartoner serving both units so that line output is identical with filling speed.

The double-web system begins by running the two materials through special threading and tensioning devices that keep the webs taut as they come off the rolls. The polyethylene becomes the inner ply and the printed, bleached glassine the outer protective layer as the two travel together over a V-plow and through a double set of feed rollers.

The pouch is formed by folding the webs and vertically sealing the side seams before cutting. To accomplish this, the webbing moves past three sets of reciprocating sealing bars: pre-heat bars, heat-seal bars at about 350 deg. F. and cooling bars that are cooled with city water that ranges between 40 and 70 deg. F., depending on the season.

Even though a conventional divider bar helps separate the two inner-facing surfaces of the pouch, tacking heads were added just before the heat-seal bars to spot attach the polyethylene to the glassine. The separator bar prevents the tacking heads from sealing the inner plies of polyethylene to each other. Thus, when the pouch is mechanically opened for filling, there is no chance that product will accidentally drop between the glassine and the polyethylene, making a single ply of material on one side of the pouch and three plies on the other.

Pouches travel through the two-stage filling cycle in conventional fashion. A light beam regulates proper operation of cut-off knives that separate the pouches and air injection helps open up the bags.

Additional mechanical bag opening at each filler has been modified by re- [*Continued on page 180*]

SUPPLIES AND SERVICES: *Packaging machinery and check weighers by Bartelt Engineering Co., Rockford, Ill. Printed glassine by Riegel Paper Corp., 260 Madison Ave., New York 16. Polyethylene by Visking Co., Div. Union Carbide Corp., Terre Haute. Cartons by Waldorf Paper Products Co., St. Paul 4, and Container Corp. of America, 38 S. Dearborn St., Chicago 3. Metal detector by E. W. Brilmayer Laboratories, Inc., 86 Fulton St., New York 38. "Sure-Way" semi-automatic caser by Salwasser Mfg. Co., Reedley, Calif.*

Three stacks of crackers, machine wrapped in overwaxed laminated glassine, are packaged in dramatically redesigned carton made of white patent-coated newsboard, printed with gloss inks. Back panel promotes new package.

Reclosable flap slips conveniently into die-cut slot. Construction is similar to the closure on company's Premium cracker package.

Ritz in fractional packs

Significant step toward greater protection and convenience is seen in National Biscuit's adoption of sectional, glassine inner wraps for its fast-selling cracker

With the introduction of its "Stack Pack" for Ritz crackers, National Biscuit Co. takes another history-making step in the refinement of cracker and biscuit packaging that undoubtedly will have a far-reaching effect in the baking and other industries.

The new Ritz pack—a significant extension of the fractional packaging idea*—contains three "cylinders" of the round crackers, each wrapped in overwaxed laminated glassine, placed in a redesigned version of the familiar Ritz carton.

The new package was developed to overcome the breakage problems of conventional dumped-packed cracker cartons and to offer the consumer fresher crackers—for a longer time—once the carton is opened, the company says. With the individually wrapped stacks, she may take out just the number of crackers wanted, while the others stay fresh in their sectional wrappings and reclosable carton.

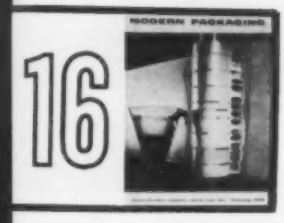
Packaging is done on machinery specially developed by National Biscuit based on its experience with sectional packaging of Premium crackers.

The 12-oz. Stack Pack sells for a few cents less than the company's former 1-lb. Ritz package. And company sales results, so far, indicate that the customer is satisfied with the price and appreciates the extra freshness and convenience. One major competitor reportedly has dropped the price of its pound package to keep up with the new, fast-selling Ritz package, and another, it is understood, is at work to bring out a similar sectional package.

New features of the carton, which the company produces in its own carton plant, are the incorporation of a convenient reclosable flap similar in construction to one Nabisco uses on its square Premium cracker carton and the use of upgraded, white patent-coated newsboard stock, gloss printed in full color to show off to advantage the dramatic revised surface design—the Ritz bull's-eye in a circle of crackers. Back panel illustrates the Stack-Pack feature. Side panels are stepped up for strong identity.

SUPPLIES AND SERVICES: *Overwaxed laminated glassine by Central Waxed Paper Co., 5100 N. Roosevelt Rd., Chicago 50, and Riegel Paper Corp., 260 Madison Ave., New York 16. Carton design by Raymond Loewy Associates, 425 Park Ave., New York 22.*

*See "Fractional Packaging," MODERN PACKAGING, June, 1950, p. 91.



16

SURVEY OF A SUPPLYING INDUSTRY

ADHESIVES

Adhesives are to the packager what nails are to the carpenter, mortar to the bricklayer, baking powder to the cook, thread to the tailor.

Dramatic new developments in packaging are continually making headlines. But, too infrequently is proper credit given to the little-seen performers behind these developments—the adhesives that hold the packages together.

No package is stronger than its seal. And, without the numerous special formulations of adhesives, the many new glamour materials of today's packaging would be useless.

Adhesives are behind the spectacular development of boilable cook-in-bag packages, skin packs, blister packs, all the laminated film and foil combinations, new thermosealed cartons, labels that stay on in the refrigerator, strong weatherproof shipping containers. In fact, there is scarcely a package that doesn't require an adhesive. And, in a big way, adhesives are rapidly becoming a deciding factor in the operation of sleek new packaging machines at faster and faster speeds, occupying less of the factory's valuable floor space.

Few package-supplying industries, perhaps, have contributed more than have adhesive manufacturers to the advancement of packaging technology to meet today's increasingly more exacting requirements. Or at such infinitesimal cost.

For whether a user pays a few cents a pound or several times that much for an adhesive, the price, in relation to the over-all cost of packaging, is inconsequential in comparison with the thousands of dollars that often can be saved through the efficiency of a versatile adhesive. There is no area where a packager, looking for places to trim his budget, can be more pennywise and pound foolish than buying an adhesive for price and not for good performance.

And no better illustration of the economical cost of adhesives can be cited than the industry's own sales figures in relation to those of total dollar volume of the packaging field. Annual sales of adhesives for packaging (all types—animal, vegetable, mineral and synthetic-base products, either in liquid or dry form) are somewhere around $115 million, covering more than a billion pounds, according to Dept. of Commerce figures and best trade estimates. On this basis, adhesives represent only seven-tenths of one per cent of the $15 billion total cost of packaging America's products.

Most significant aspect of the adhesive industry's growth is the impressive rise of synthetics, with 1957 industry sales of synthetics for packaging purposes reported by the Adhesives Mfrs. Assn. of America at $32.7 million, covering 137.5 million pounds, in comparison with 1950 sales of $11.3 million and 52.9 million pounds (see graph, p. 100). This record is an interesting reflection of the amazing growth of new packaging developments that could not be produced without resin types of adhesives. It also demonstrates the ability of adhesive manufacturers to keep step with these developments.

By contrast, sales of vegetable adhesives increased only moderately during the same seven-year period, 225.7 million pounds in 1950 and 234.8 million pounds in 1957, represented by $20.2 million

Laboratory extruder is used for applying polyethylene to various surfaces to test the effectiveness of "primers" or adhesion "promoters" designed to change the surface of difficult-to-adhere materials. The technique has provided adhesion which otherwise would be difficult to obtain.

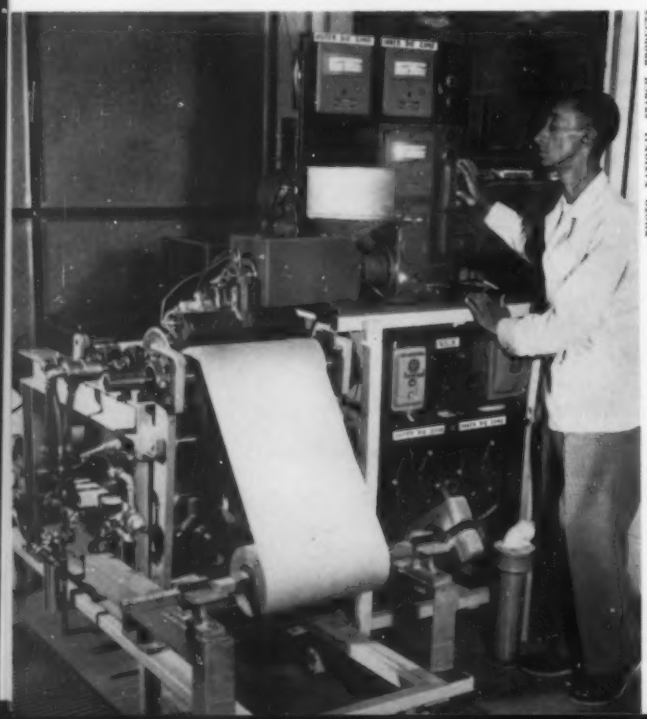
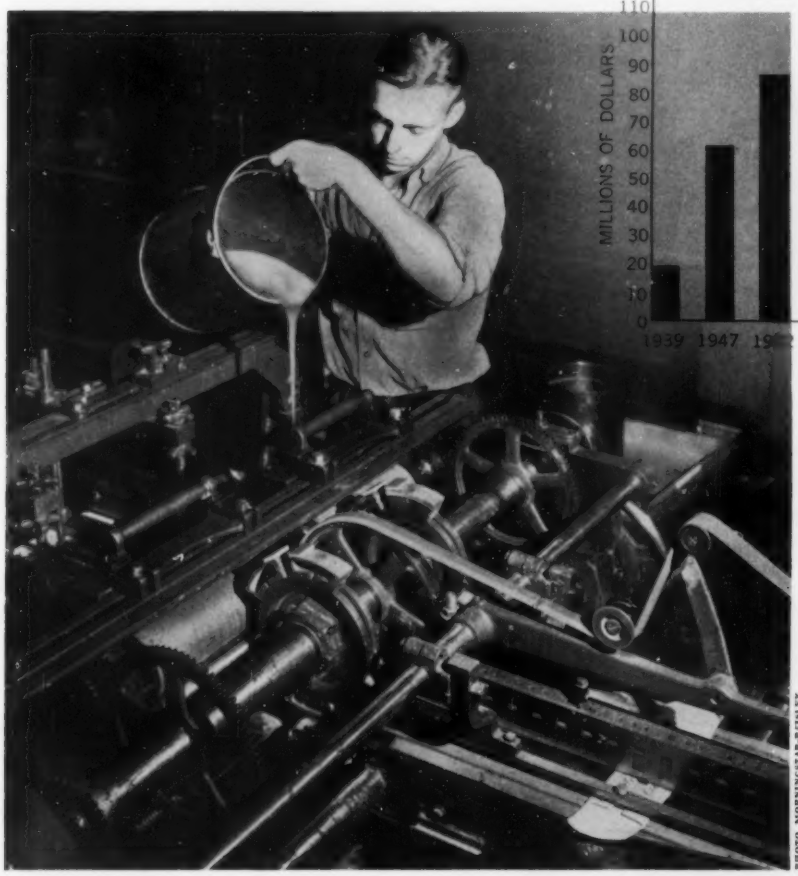
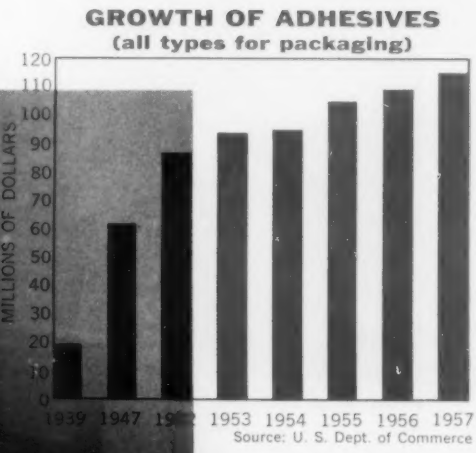


PHOTO NATIONAL STARCH PRODUCTS

Rapid-setting formulations and new application techniques are the essence of today's dramatic packaging, and are becoming more and more the crucial factor in high-speed operations





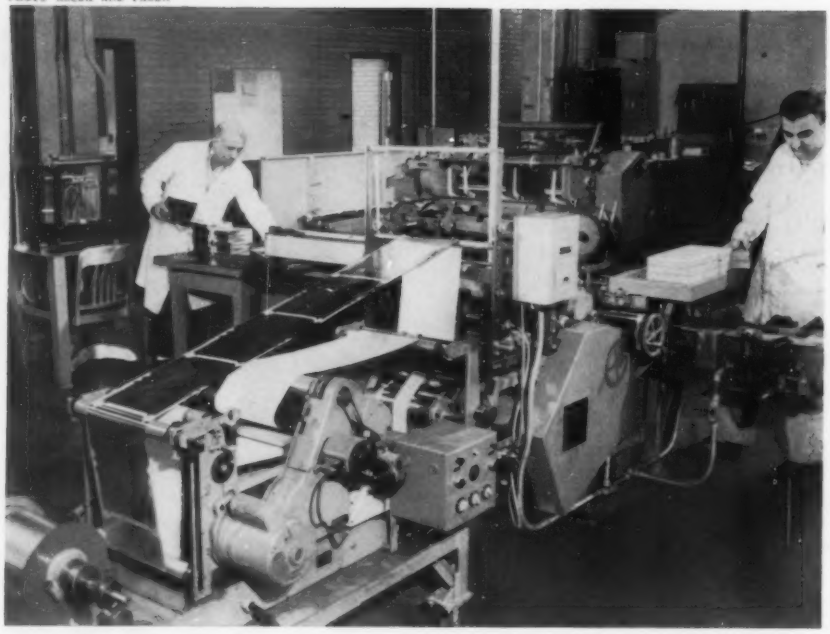
Glue applicators in nation's packaging plants consume a billion pounds of adhesives a year. Photo of typical application shows operator pouring adhesive into folding-box-making machine.

and $23.4 million, respectively. And sales of animal adhesives for packaging during the same seven-year period increased less than a million pounds—28.2 million pounds in 1950 in comparison with 29.4 million pounds last year.

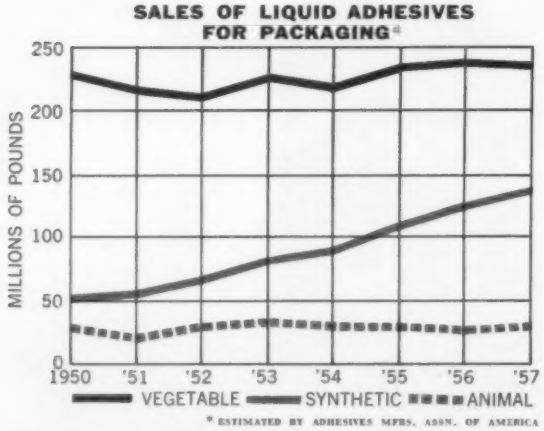
Preparing an adhesive to stick a package together is no simple matter of mixing a batch of glue. It takes a high degree of technical skill to compound a formulation that has just the right flow, the right tack, the right temperature range (in the case of hot melts), the right setting speed, the proper bonding and aging properties; that often must be tasteless, odorless and non-toxic, and that must allow for other variables among the temperamental characteristics of a specific packaging material or packaging-machine operation.

And with the constantly increasing number of new packaging materials, including the use of adhesives for coatings and laminating agents, each demanding specially built-in properties, the chemistry and phy-

PHOTO ALCOA AND PACON



Printing an adhesive pattern with a hot-melt formulation on area to be sealed is a technique rapidly gaining favor. Test model is shown, "printing" an adhesive on foil wrap for subsequent heat sealing in wrapping machine. Method eliminates conventional all-over wax coating.



Rise of synthetics is impressively reflected on this graph prepared in accordance with liquid sales reported by the Adhesives Mfrs. Assn. of America.

sics of adhesion become increasingly more complex.

Nor have these complexities been simplified by the hundreds of tailor-made formulations required for specific applications and the former reluctance of some adhesive manufacturers, for competitive reasons, to divulge the details of newer resin additives.

Today, happily, this situation seems to be changing. Most of the synthetic materials are now identified generically. Users, confronted with adhesion problems unknown a decade ago, have a better opportunity of obtaining formulations with known ingredients to meet the ticklish requirements of new materials. There also seems to be a noticeable trend toward better rapport between user and supplier for the exchange of technical information based on sound research by the present expertly trained staffs of the adhesive manufacturers. The largest firm in the business points out that one out of eight of its employees today is technically trained.

The materials of adhesives

Packaging adhesives are classified as being derived principally from animal, vegetable or synthetic sources. However, mineral-base products used in the manufacture of corrugated board also are an impressive part of the industry tonnage volume, accounting for about 350 million tons last year.

Until 1900, packaging adhesives consisted primarily of primitive animal glues, natural gums and flour pastes. But the growth of mass-production packaging called for the development of adhesives through chemical conversion of corn, tapioca, potato and sago starches. These starch-based adhesives still account for the largest poundage share of packaging application, often used in combination with the newer resin additives.

Animal glues for packaging are used mostly in set-up box manufacture and for gummed tapes. Casein, a by-product of the dairy industry, has won acceptance for iceproof glues used to adhere labels on beverage and beer bottles.

Skin packs

PHOTO BAKELITE

Boilable film bags

PHOTO STANDARD PACKAGING

Protective laminations

Unseen performers behind today's spectacular packaging developments are the adhesives that provide heat-sealing coatings on the cards for skin packs, make possible the lamination of new plastic films that will withstand boiling temperatures and assure moistureproof barriers to protect the efficacy of many drug products.

The rapidly growing synthetic adhesives got their start in World War II in the development of weatherproof shipping containers and for seals and laminations demanding a higher degree of protection and performance. In this category are all the resin emulsions, latex adhesives, lacquers, heat-sealing and hot-melt formulations.

The industry

Although 75 or more companies supply adhesives to the packaging field, the Adhesives Mfrs. Assn. reports that just five firms do 65% of the total business (excluding starches and dextrins of the corn-refining industry).

There has been a trend toward mergers and consolidations among adhesive firms with the rise in the use of synthetic resins, which, reportedly, have made the going more difficult for smaller companies. Twenty-four firms are members of the industry's association, whose principal activities cover statistical and economic studies for use by the industry and cooperation with Governmental agencies.

Developments

Development work in the adhesives field today is being directed more and more intensively toward improvements to meet the exacting adhesion requirements of new materials and highly mechanized techniques of package production. This means new formulations and modifications to function efficiently with today's plastic films, foils, paper and paperboard surfaces, glass and metal. It means rapid-setting adhesives to provide almost instantaneous sealing in high-speed machine operations. It means adhesives supplied in forms that are convenient to apply and that eliminate costly make-ready and clean-up.

One of the most widely discussed subjects is the development of what are known as "primers" or adhesion "promoters," which in essence are coatings and chemical surface treatments designed to change the surface of certain difficult-to-adhere materials so that lamination may be accomplished by economical extrusion methods. The technique of using primers in the extrusion of polyethylene onto such packaging materials as foil, cellophane, saran-coated films, polyester films and others, has provided adhesion otherwise difficult to obtain.

Another noteworthy advance in adhesive application is the rope-form, hot-melt technique, whereby the hot-melt adhesive in the form of an extruded flexible rope is fed from a reel into a heated pump and conveniently applied directly to the substrate under easily controlled conditions.*

A second new mechanical device which facilitates the handling of hot [*Continued on page 174*]

*See "Adhesive on a Reel," MODERN PACKAGING, Aug., 1956, p. 168.

Non-skid coating applied to beer cases at Liebmann Breweries eliminates slipping in shipment and handling—another example of modern uses for adhesives in packaging.

PHOTO NATIONAL STARCH PRODUCTS

Convenient portion packages of Highlander's frozen fruit salad and frozen chocolate malt can be easily opened by consumer to original blank and used without being touched by the hands. Unique scoring and die cutting of packages permit leakproof set-up on automatic equipment. Five-color rotogravure-printed foil overwraps four cubes.

The tiny, cubical, folding carton that popularized single-portion packages of ice cream 10 years ago because of the efficiency of its mechanized forming, filling and sealing[1] is finding new applications that suggest a much broader market in many types of single-service frozen foods.

The same automatic machinery is now being used by Highlander Frozen Foods, Inc., Chicago, to package two other frozen foods: chocolate malt and fruit salad. From a waxed paperboard blank, the machine forms a cube, pumps 3.2 oz. of the semi-frozen viscous product into it and closes the lid. The package is then frozen to form a hard cube.

Like Highlander's packages for ice cream,[2] four of the paperboard cubes are overwrapped together in five-color, rotogravure-printed aluminum foil to provide a convenient unit of sale in the freezer cabinets of supermarkets and self-service stores.

Highlander, a division of the Central Ice Cream Co., is moving its malt and salad into national distribution after a successful period of test marketing and is now evaluating tests of three additional frozen products packaged in similar containers.

The package, a 1¾-in. cube of lightweight, waxed, bleached food board, is closed by its tuck-in flaps without the use of adhesives. It can be opened into its original flat form by a gentle tug so that the product can be dropped into a glass or on a salad plate without touching the hands. The blank has diagonally scored corners that permit it to be folded into a cube with no open seams on the bottom or sides. Wing-like triangular folds resulting from this action on automatic equipment are pressed back against the container and the top flap's tucks are pushed into the side folds.

The packages are formed and filled four at a time on the special equipment originally designed for ice cream. The waxed paperboard blanks are fed from four magazines, each holding 1,000 blanks. From each magazine a blank slides under a plunger that presses the board down into a bucket on a conveyor belt, forming it into an open-top cube during the process. The bucket then carries the container under a filling head. The line is equipped with two two-head fillers that have a total output of 176 cartons a minute, or 44 a minute per filler head.

The product is pumped to the filling heads in a semi-frozen state. In addition, enough diced fruit

[1] See "Arden's Diced Cream," MODERN PACKAGING, Nov., 1948, p. 100.
[2] See "Foil-Wrapped Ice Cream," MODERN PACKAGING, Sept., 1953, p. 138.

is pumped into the line for the frozen fruit gelatin salad to give the salad a 50% fruit content.

After filling, the double top flaps are automatically closed. The cubes move onto a collector belt that conveys them to a quick-freeze cabinet. Long rows of the packages are automatically pushed into the freezer and slowly travel along four tiers for 30 minutes. In effect, the freezing makes a final seal on the already snug-fitting top and side flaps of the waxed paperboard cube.

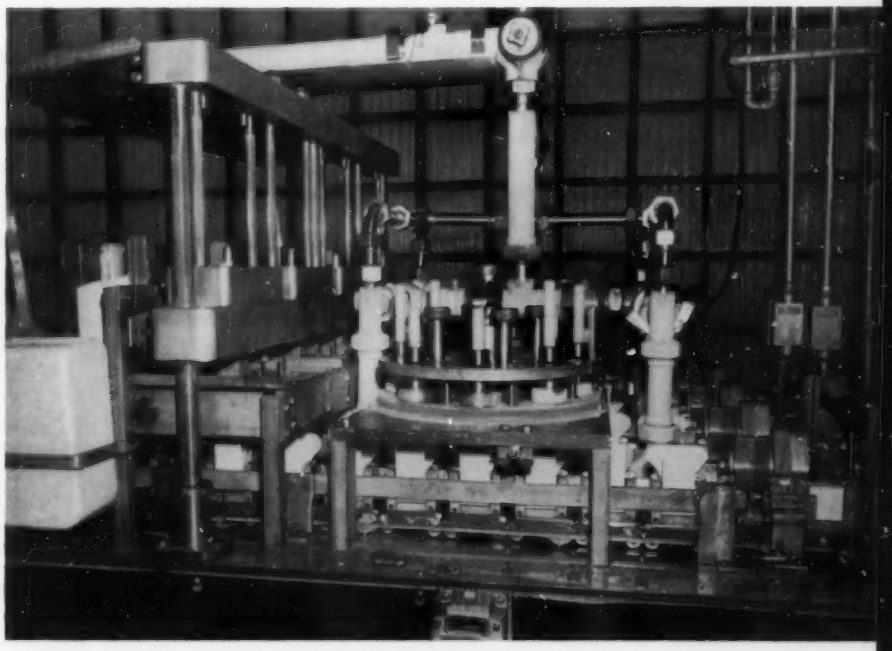
Coming out of the bottom tier of the freezing chamber, the cubes are conveyed to the foil-overwrapping machine. The individual diced packages are positioned four at a time and overwrapped in paper-back, heat-sealing foil at the same speed as the freezer line (44 groups of four each minute). The brightly colored aluminum foil cube packages, measuring approximately 7½ by 2 by 2 in., are hand packed into a corrugated shipper.

Highlander finds a market for its single-portion frozen malt and salad in hospitals, military installations and similar institutions, as well as in retail outlets and industrial lunch rooms. While the company is promoting the products' low calorie count —63 per serving—it also is pushing the package for its obvious consumer convenience appeal.

SUPPLIES AND SERVICES: *"Diced Cream" cartons by the Western-Waxide Div. of Crown Zellerbach Corp., San Leandro, Calif. Cartons formed, filled and closed on machinery made by the Diced Cream of America Co., 650 S. Grand St., Los Angeles. Printed "Reyseal" foil wraps by Reynolds Metals Co., Louisville 1, Ky. Wrapping machinery by The Globe Co., 4000 S. Princeton Ave., Chicago.*

frozen foods

The same cube carton that popularized single-service ice cream is now branching out to other products: Highlander markets a fruit salad and chocolate malt dessert



Automatic machine forms, fills and closes four containers at once for total output of 176 units a minute. From four magazines at left, blanks slide under plungers. Mandrels come down, forming blank into cube shape and placing it in conveyor-belt bucket. Cartons move under rotary two-head fillers, are automatically closed by tuck-in flaps and move onto a collector belt headed for the quick freezer and foil-overwrapping unit.

Pocket tape dispenser

A new transparent package that converts into a handy dispenser at the flick of a finger is calculated to build impulse sales of Permacel-LePage's cellophane tape. Designed to be carried in purse or pocket, the disk-shaped package is injection molded of high-impact, transparent polystyrene. A 1,296-in. roll of ½-in.-wide tape is completely enclosed inside the unit to prevent the pressure-sensitive tape from adhering to other objects while it is being carried about.

The dispensing action is provided by a 1½-in.-long hinged bridge which flips open for use. After the desired amount of tape is pulled from the roll, it is cut off against a cutter bar at the end of the bridge. The end of the unused portion of the roll automatically adheres to a projection just above the cutter bar to position the tape for instant use when it is needed again. The bridge snaps back into position to reclose the package securely.

A circular paper label, printed in red, yellow and black, spotlights price information on a white panel. *Polystyrene dispensing package by Pyro Plastics Corp., Union, N.J. Label by Unimann Printers, Inc., New Brunswick, N.J.*

DESIGN

Showcase cartons add appeal to new stapler line

"Upgrade the product; upgrade the package" is the maxim behind a redesign program by Bostitch, Inc., which has added a three-tone gray model to its line of stapling machines in a new, specially constructed carton. The company formerly made only black staplers and marketed them in folding cartons having very little display value.

The new package, which also can be used for effective in-store display, consists of a telescoping paperboard cover over a die-cut display platform. Cover copy accentuates brand identity while maintaining essential re-order data needed by retailers. For extra eye appeal, background color on cover side panels is graduated from white at the bottom to solid color at the top. The display platform has die-cut tabs to hold the stapler securely in place. A pull-out paperboard packet containing 1,000 staples fits inside a slot in the platform's side panel. When the carton is closed, the packet is visible through a notch in the cover's bottom. *Design by Richard E. Paige, Inc., 114 E. 32 St., New York 16. Carton by Atlantic Carton Corp., Norwich, Conn.*

Fine-screen pre-printing

Fine color printing on corrugated shipping containers and display stands already is a well-documented trend (see "*Corrugated Goes Beautiful*," MODERN PACKAGING, March, 1957, p. 147, and "*Fine Printing on Corrugated*," July, 1957, p. 116), but its application to consumer pre-packs hasn't been nearly so pronounced. The introduction by General Sportcraft Co. of a badminton set in a corrugated box displaying fine-screen, full-color rotogravure illustration indicates a significant extension of the technique of combining colorful printing with this packaging material.

The sharply clear halftone reproduction on the telescoping corrugated box cover is achieved by pre-printing a white-coated kraft outer liner before combining it with the fluting and inner liner. This process, the company says, enhances package appearance at a commercially feasible cost. Conversion of the box to a point-of-purchase display piece is done simply by removing the cover and securing it by built-in tabs to the back panel of the bottom section. *Preprinted corrugated ("Varni-Graphic") by Display Div., Gibraltar Corrugated Paper Co., 350 Warren St., Jersey City.*

HISTORIES

Now it's alarm clocks canned like coffee

Supermarket shoppers may now select a "factory-fresh" alarm clock, hermetically sealed in a key-opening can the same as they buy coffee.

The revolutionary new package has been adopted by General-Gilbert Corp., manufacturer of clocks in Winsted, Conn., since 1807, to make for easier and more economical handling in stores. Canning, the company says, protects electric and 1-day alarm clocks against breakage in handling and deterioration in storage. The new $1.98 and $2.98 models in cans carry a full-year guarantee instead of the customary 90 days. The hermetic seal reportedly keeps clock lubricating oil from drying out and prevents the entrance of moisture that may injure the works of a clock stored for long periods. Interior corrugated protects the clock against shock. Stores handle, display and sell the clocks similarly to other canned goods. The cans are standard type, packed 24 to the case. Display clocks and full-color labels on the can show the customer exactly what she is buying. *Cans by Continental Can Co., Metal Operations Group, 100 E. 42 St., New York 17.*

Special films for fresh meats

Three coated cellophanes employing nitrocellulose lacquers or a thin polyethylene extrusion preserve meat bloom, cut waste and save up to 12% on materials

PHOTO DU PONT

Self service, as exemplified by this ultra-modern supermarket display case, accounts for nearly half the fresh meat sold today. Three modified cellophanes that increase preservation of vital product bloom, enhance appearance and reduce packaging costs should further stimulate pre-packaging trend.

With the increasing swing to pre-packaging of fresh meats, there is today correspondingly broader technical knowledge concerning the types of films best suited for packaging and about the preparation and storage conditions needed to give optimum shelf life to these highly perishable products.

The most significant material result is the appearance now of three newly modified types of cellophane that create improved product protection and appearance plus estimated savings in packaging costs of 12%. Two of these films employ special nitrocellulose coatings. The third material is one uniquely coated with an unusually thin extrusion of polyethylene. With new built-in combinations of desirable packaging characteristics, any one of them is said to be capable of replacing the standard type of cellophane now used for the pre-packaging of various cuts of fresh meat.

Such pre-packaging started virtually at zero in 1946 with the introduction of the first cellophane specifically designed for fresh meats. Now it has grown to the point where nearly half of the annual $5½-billion volume in fresh meats is sold without benefit of clerks. More than 15,000 stores have self-selection meat cases. And among the larger supermarkets, more than 85% of the stores have complete self service for meats.

With this growth have come problems in the pre-packaging of fresh meats.*

Foremost is meat discoloration—a phenomenon brought about by an absence of oxygen, which requires that the packaging material must have certain oxygen-permeability characteristics.

Secondly, there is moisture loss through the packaging film that results in lower net weights and also in the eventual discoloration of the meat through dehydration, thus requiring the use of packaging materials which have a definite range of water-vapor-transmission values.

Finally, there is the fact that various constituents of meats degrade conventional cellophane films, reducing both dimensional stability and clarity, and leading to wrinkling of the package and less strength

* See "Meat-Packaging Criteria," MODERN PACKAGING, Feb., 1954, p. 131.

in the wrapper. It has been estimated by the U. S. Dept. of Agriculture that 8% of meats which have been pre-packaged in the past have had to be re-wrapped because of breakage in weakened films.

These problems are solved in various degrees by the new trio of modified wrapping materials. To understand how this has been accomplished, here is some technical background on meat-packaging film construction and application.

The basic film sheet for the new materials is the same—a layer of plain No. 300 cellophane. This permeable material is then coated on one side to retard the transfer of water vapor. The coating, however, must not in turn seriously impede the transmission of oxygen to the meat surface. Oxygen is vital to preserve the fresh bloom of the meat.

In all cases, the uncoated side of the cellophane is placed against the meat. This is important, since dry cellophane has a low gas permeability. So high transmission of oxygen through the film requires formation of a moisture layer on the film. This layer will form evenly only on the inside of the package, that is, on the uncoated, wettable side of the film. This wettable surface serves another purpose—the prevention of surface accumulation of meat juices that promote bacterial growth and subsequent darkening of the meat.

Optimum oxygen transmission rates for fresh-meat packaging films are difficult to calculate, since meats vary in their susceptibility to darkening, and meats also vary in this characteristic in different parts of the same cut. For this reason, suppliers have tried to build the maximum oxygen transmission rate into the new films.

The effect of water-vapor transmission on weight loss and darkening in meats is also variable, ranging from slight in large or thick cuts to heavy in thin meat slices that possess a greater surface area.

Although transmission rates of the new films can be varied by changing the formulation or thickness of the coatings, this type of control is uneconomical because of the great variety of handling and storage conditions found in supermarkets, coupled with a practical limitation on the number of different films which a pre-packager of fresh meats can use.

A polyethylene coating

The most radical departure from conventional cellophane coating techniques is in the polyethylene-coated material called REO, developed after six years of research by American Viscose Corp. Here, low-density polyethylene is extruded on a specially prepared base sheet of cellophane by a new method that enables the polymer to be controlled to a thickness of approximately ¼ mil.

This film not only lowers transmission of water

Laboratory test by supplier checks the protection afforded by a polyethylene-coated cellophane under display-case conditions. Wrapper offers lower water-vapor transmission, yet permits the free flow of oxygen that is necessary to the preservation of the bright red color of fresh meats.

PHOTO AMERICAN VISCOSE

PHOTO DU PONT

Easier handling for modern pre-packaging operations is a key feature of the specially coated films, which are specifically tailored for use on fresh meats. These cellophanes have more slip and a snugger fit, and give tighter seals over a wider temperature range. Shown above is part of a dual packaging set-up with two wrapper and sealer operators. Completed packages move to girl in the foreground for weighing and pricing.

Versatility is claimed for another modified cellophane, coated with a special nitrocellulose lacquer. The fresh and processed meats, vegetables, poultry and fish shown here all need a wrapping material with a strong water-vapor barrier; most need high permeability to gases to maintain quality.

PHOTO OLIN MATHIESON

vapor and boosts oxygen transfer, but is reported to have three other advantages over previously used meat-wrapping cellophanes:

1. Its greater dimensional stability enables packages to be more tightly wrapped and eliminates wrinkling and cockling.

2. Its clarity is maintained. Though it possesses a slight initial haze, which is not apparent after wrapping, visibility through the film is not further affected by contact with the meat.

3. Its greater strength permits the use of this lighter film on big or bony meat cuts that formerly required a No. 450 cellophane. Elimination of the heavier film for this operation reduces in-store inventories of wrapping materials. Its strength also permits more successful home-freezer storage.

While the new film is relatively expensive—79 cents per pound, compared with 65 cents for other meat cellophanes—and has reduced yield—18,250 sq. in. per pound—it is reported to save money because the combination of dimensional stability and strength virtually eliminates re-wraps and enables packages to withstand almost constant handling without breaking in retail display cases.

Operating figures from six large grocery chains show that the cost of re-wrapping meat, if the product must be downgraded, runs between 75 cents and $1 per package. Since a 16-by-16-in. polyethylene-coated sheet costs only 0.3 cents more than ordinary cellophane (1 cent per sheet), the economy of eliminating re-wraps is obvious.

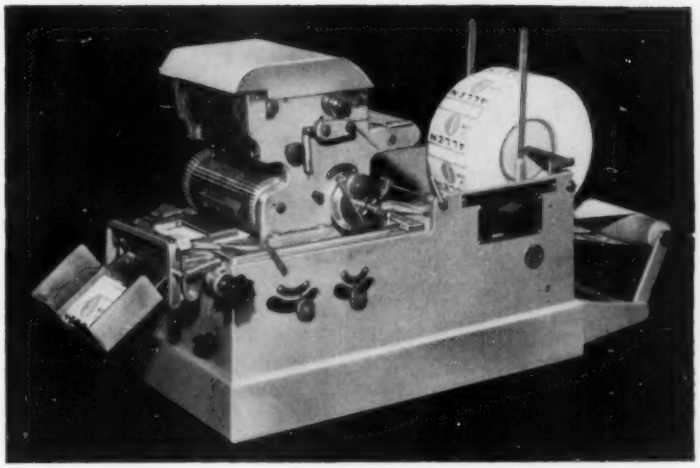
In the replacement of 450-cellophane sheets, the polyethylene-coated cellophane saves 12% in material cost. Also, the latter can be pulled tighter in the wrapping operation, thus enabling large sheets (20, 18 and even 16 sq. in.) to be cut as much as 1 in. shorter. While this film is said to have initially a burst strength (Mullen) only 10% higher than ordinary cellophane, after one day in contact with meat the gain becomes 50% due to the greater stabilty of the polyethylene-coated material.

One chain store has estimated that this packaging material reduces the weight loss through moisture transmission by 26%. While market tests are not too accurate because of the wide difference in handling and storage conditions and in susceptibility of different meats to darkening, another grocery chain reports that high-quality ground meats packaged in the film have maintained a salable color for a period of two days, which is an unusually long period for this sensitive product.

Two other modified films

The two other fresh-meat wrapping films both employ special new nitrocellulose-lacquer coatings to boost oxygen perme- [*Continued on page 174*]

Simplification at Allen Mfg. Co. is accomplished with a fast rotary machine that imprints roll-stock labels as needed, cutting costs by 45%



28 labels for 1,457 items

Labeling of widely varied product lines, such as hardware, can be wasteful unless the ratio of label-to-carton purchases is in balance.

The reason is that some items in a big assortment move slowly, while standard, pre-printed labels can be economically bought only in large quantities. The result is that label inventories and storage space mushroom, with likely deterioration of label stocks.

An answer to this problem—which in one case at least has saved 45% in over-all labeling costs—is to switch to pre-printed stock labels that show broad product classifications, but have blank panels for in-plant imprinting of specific product data at the time of labeling. This is accomplished at the Allen Mfg. Co., Hartford, Conn., by a compact rotary imprinter with a speed of 150 labels per minute.

Allen makes 1,457 different styles of hex keys and screws, pipe plugs, dowel pins and other machined fasteners. Formerly, master labels for all of these products were made up in great quantities by a printer, who then imprinted them in smaller batches for each item. This created a formidable inventory of labels at both the printing shop and the manufacturing plant, and produced the following imbalance: in two recent years, the company's annual purchases of labels ran two to three times the orders for the metal-edged product boxes.

Seeking to correct this disparity, Allen had its label needs analyzed and discovered it could use only 28 labels (split between two sizes) to represent nine basic product groups. This cut the initial cost of master labels by 20%. Then, by in-plant imprinting of roll-stock, pre-gummed labels, the company shaved 80% off the cost of secondary printing and labeling activities—for a net saving of 45% on material and labor costs.

Labels come from job printer with only company name and broad product-group information, plus blank for in-plant imprinting of specific product data. Stock-printed, gummed roll labels are data imprinted at Allen Mfg. as needed on 150-labels-a-minute unit shown at top of page.

Other benefits followed. The roll-stock labels reduce inventory and cut storage space from the former 600-sq.-ft. floor area to a 10-ft. wall bin. Messy hand stamping of labels, which was done for small quantities of special products, is eliminated because the unit can quickly handle all labeling.

Allen's four imprinters are set up permanently for each of the two label sizes and for either the red or the black inks that designate product thread types. Printing is from rubber mats mounted on metal plates. Because the company hand labels its boxes, a cut-off attachment is used to separate and stack the labels after they have been imprinted.

SUPPLIES AND SERVICES: *Labels and "Roto Kimco" imprinter by A. Kimball Co., Rewe St., Brooklyn 11.*

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Packaging Pageant

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1 A deep gusset at the bottom of the waxed glassine bag for Russell's potato chips enables the package to stand upright for in-home eating convenience and for stand-up display in retail stores. When the top is torn off, the bag (waxed inside and out for added rigidity) becomes a "serving bowl." Bag, Cupples-Hesse Corp., St. Louis.

2 C. B. Fleet is marketing its Oil Retention Enema in what is reported to be the first blown vinyl bottle in commercial production. The linerless, disposable vinyl squeeze bottle was selected to provide protection for a product with mineral-oil content and other consumer requirements which could not be met with lined polyethylene bottles, the company says. Blown vinyl bottle, Plax Corp., Hartford. Carton, Wilson Paper Box Co., Richmond, Va.

3 The Chester H. Roth Co. is using a tear-strip-opening carton with a die-cut acetate window to market its Sheerlife nylon hosiery in self-selection stores. The tear strip runs down the back of the carton, which was adopted, the company says, to protect against rough handling and pilferage while satisfying self-service display and merchandising needs. "Zip-Open" carton, Container Corp. of America, Chicago, using Celanese acetate for the window.

4 Nash Coffee Co. steps up its packages for the restaurant trade with a powerful new family design in red, brown and white. The duplex, automatic-style bag, made of glossy white stock with a protective inner liner of amber glassine, spotlights the company name in a white oval on all four sides. Canned coffee has same design. Design, Frank Gianninoto & Associates, New York. Bag, Oneida Paper Products, Clifton, N. J.

5 J. L. Read Foods has adopted two new private-mold glass containers for its sauces and dressings. An oblong bottle with a tapered shoulder is used for liquid products and a wide-mouth square jar is used for dressings designed to be spooned out. Both containers have twist-off metal caps and redesigned paper labels with greater identity. Containers, Owens-Illinois Glass Co., Toledo, O. Closures, White Cap Co., Chicago. Labels, U. S. Printing & Lithograph Co., Cincinnati.

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6 During a change-over to a new facial-tissue carton with a non-commercial look for in-home use, Marcal Paper Mills used an intermediate design combining basic elements of the former package with innovations planned for the new one. The reason for this transition, the company says, was to enable retailers to clear their stocks while bridging customers' brand recognition to the redesigned package, in which the company's bold logo is confined to a perforated oval which is removed for dispensing. Design, George Riedl, Clifton, N.J. Cartons, Berles Carton Co., Paterson, N.J., and Coates Board & Carton Co., Garfield, N.J.

7 A fully printed cellophane bag is reported to be winning retail and consumer acceptance for Hillsborough Bulb Co.'s packaged gladiolus bulbs. Designed for self-selection selling, the bulb package is printed in red, green, yellow and white. Cellophane bag, The Dobeckmun Co., Cleveland.

8 Rogersnap Business Forms Co. has adopted a "flip-top" dispenser carton for its line of office stationery. The one-piece self-locking carton flips open and can be reclosed securely after use for storage. Carton, Pollock Paper Corp., Sub. St. Regis Paper Co., Dallas.

9 To establish brand identity for Mistletoe margarine, Swift & Co. breaks with tradition in its field by using a cartoon trade character as the chief design element on its high-gloss, full-color cartons. "Little Miss Mistletoe" is featured on top and side panels against a yellow background. Carrying out the design theme, the product name is printed in block letters such as a child might make. "Hi-Fi" carton, Marathon Div., American Can Co., New York.

10 Multiple sales of Eveready flashlight batteries are encouraged by a paperboard sleeve holding two batteries in place for hang-up display. The paperboard sleeve, which won an award in the Folding Paper Box Assn.'s 1958 competition, is die cut for visibility. Sleeve, Lengsfield Bros., New Orleans.

11 A waxed paperboard tray with a green-and-red-printed cellophane overwrap is credited with increasing sales of South

Jersey Produce Exchange's packaged fresh vegetables for soup. The new package supposedly offers longer shelf life due to minute perforations made in the cellophane at the packing plant. Tray, Standard Folding Trays Corp., Jackson Heights, N. Y. Overwrap, Lassiter Corp., New York, using American Viscose Corp.'s cellophane.

11

12 Lower packaging costs, lighter shipping weight, less storage space and better stacking are the benefits cited by Cross & Peters for the 3½-lb.-capacity corrugated shipping container with polyethylene bag liner it is using for Better Made brand potato chips sold to the restaurant trade. The disposable carton also gives full product protection in shipping and storage, the company says. "Gair Shell-Pak" container, Continental Can Co., Gair Fibre Drum & Corrugated Box Div., New York, and Shellmar-Betner Div., Mt. Vernon, O.

12

13 Novel effect in atmospheric design is achieved by the printing on the cellophane overwrap of a towel package for Samuel Lamont & Sons, Belfast, Ireland, that simulates a bathroom setting. The towels are visible through unprinted areas, representing mirrors, against a white-tile background. Reproductions of men's and women's toiletry accessories on shelves, with "reflections," are printed on the window portions. Design and printing, Colodense, Ltd., Bristol, England. Package, British Cellophane, Ltd., London.

13

14 Trend to packaging preserves in cans is indicated by adoption of the key-opening, collar-type metal vacuum can for Wm. Barnes, Inc.'s Home Brand strawberry preserves. The reclosable can features all-over lithography. Can, American Can Co., New York.

14

15 An on-package premium—a detachable perforated panel of cartoon cut-outs—is calculated to add shelf appeal to Dr. Pepper's six-pack carton for its soft drink, now in redesigned bottles with red-and-white applied-color labeling. The cut-out panel strips off to reveal a festive-looking carton design of red and yellow vertical stripes against a white-and-brown background. Design, Frank Gianninoto & Associates, New York. Carton and cut-out panel, Mead-Atlanta Paper Co., Atlanta.

15

Packaging Pageant

16 Designed for ease of carrying as well as for convenient opening and reclosing is this "traveling case" carton for Chicopee Mills' Chux brand disposable diapers. The pink-and-gray striped carton has a die-cut carry handle. For easy opening of the dispensing carton, its flap is glued only to eight unprinted circles. Thumb pressure frees the flap, which is then torn back along perforations to a fold line. Carton, Robertson Paper Box Co., Montville, Conn.

17 Granny Goose Foods takes full advantage of the realistic, full-color effects on transparent film for its new packages of Dip Chips in polymer-coated cellophane bags. The feature is a color reproduction of a lazy Susan filled with appetizing party dips. A transparent oval in the center of the lazy Susan illustration —the only unprinted area on the bag— integrates the product as part of the design. Design, Walter Landor & Associates, San Francisco. Coated bag, Milprint, Inc., Milwaukee.

18 Heavy-duty applications of polyethylene bags are suggested by their adoption by General Fire Extinguisher for packaging Chemical A Powder, used to refill foam-type fire extinguishers. The film's tear strength, chemical inertness and resistance to moisture and water-vapor transmission afford the necessary product protection, the company says. Bag, Tower Packaging Co., Skokie, Ill., using Eastman's Tenite polyethylene.

19 A gift box that looks like a book is designed to promote sales of Alexander Mfg. Co.'s pen-and-pencil sets as graduation gifts. The hinged box cover opens to reveal the products on a fabric-covered platform, with a congratulatory message on the inside cover. Cover design is printed on silver-colored, pyroxylin-coated paper. Box, Dennison Mfg. Co., Framingham, Mass.

20 A "form-fitting" corrugated shipping container is being used by Futorian Stratford Furniture Co. for its Stratolounger adjustable easy chair. Illustrating the growing appreciation by manufacturers of the promotional value of shippers, the material-saving carton features illustrations of the chair in four positions and a slogan. Shipping carton, Gaylord Container Corp., Div. Crown Zellerbach Corp., St. Louis.

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Foam cradle for fragile products

To protect delicate vacuum tubes, General Electric switches to molded polyurethane and chalks up big savings in packaging costs, weight and cubage important to industrial shippers

Completely encased in a molded sandwich of polyurethane foam, this fragile General Electric magnetron power tube is secured to the lower half of the protective package by bolts. A barrier bag and corrugated case complete the package, which weighs 68% less than previous wooden case.

PHOTOS STANDARD PLASTICS

Foam is molded by using a special mixing head to blend the pre-polymer, water and catalyst as it pours into a wooden mold. After a cover is applied, foam swells to fill the cavity and is then cured for 2 hrs. in an oven at 250 deg. F.

Improved industrial packaging is on the way as a result of the use of new, protective foam materials which replace the bulk, weight and cost of traditional shipping methods.

A prime example is the adoption of a special molded polyurethane-foam cradling cushion in a corrugated case for packaging delicate magnetron power tubes by General Electric Co.'s Power Tube Dept., Scranton, Pa. The previous container was a 232-lb. gross weight wooden packing case (style 2½) using rubberized hair for cushioning. Not only does the new foam permit reduction of the gross weight of the shipping container to 75 lbs., but it helps lop 30% off the packaging bill, too.

What is polyurethane foam? The material stems from a basic chemical called an isocyanate, a derivative of toluene. Combined with a glycol, the isocyanate monomer turns into a polyester or polyether, called the "pre-polymer." Addition of water and an amine catalyst triggers the production of carbon dioxide, which puffs the mixture into a foam. The foam is set by oven curing.

By modifying the pre-polymer, catalyst or processing, these foams can be made with widely varying properties and textures. In general, polyurethane foam is tailor-made for each application.

Since the product to be packaged—an oddly shaped vacuum tube with several projections—is sold to the Air Force, the packaging must meet stringent shipping requirements and be capable of withstanding climatic conditions ranging from tropical heat to arctic freezes.

The polyether foam formulation picked for this application is well qualified for these variations because it can withstand temperatures ranging from minus 50 to 160 deg. F. without cracking or losing its resiliency. Tensile strength of the material is 28.7 psi and it rates 10% compression at 1.28 psi under standard test conditions. The nature of this last characteristic can be gauged by the fact that a common auto-seat cushion has a 10% compression figure at only 0.4 psi.

For the GE radar tube, the foam cradle is made by a supplier. Initially, a wooden model of the tube

was constructed, then split along the line of symmetry. From these halves, molds were constructed. A special machine mixes the pre-polymer, water and catalyst in a nozzle and sprays them into the molds, which are then conveyed through an oven for 2 hrs. at 250 deg. F. The process is continuous and could be installed in a packager's plant.

At the GE plant, the tubes are cradled in the molded foam and screwed to plates bonded in the lower half. This sandwich is placed in a barrier bag of laminated foil and paper conforming to Specification MIL-B-131B and it is then enclosed in a corrugated shipping case. Standard 3-ft. drop tests on the top, bottom and ends of the 12-lb. net weight package have indicated that the foam could be made even thinner without tube breakage. However, this is not practical because the tubes must be separated a certain minimum distance in warehouse stacks to prevent deterioration of magnets that are components of the product.

Wide possibilities are foreseen for this packaging material since it can be molded, as in this application, or sprayed directly in place on a paper-wrapped product. Equipment and application techniques now under development for this second method could have a striking impact on the packaging of furniture, instruments and other fragile or bulky products.

SUPPLIES AND SERVICES: *Package designed and molded by Standard Plastics, Inc., Breinigsville, Pa. Isofoam L8 pre-polymer and mixing machine by Isocyanates Products, Inc., New Castle, Del. Laminated foil and paper by Spec-Fab Co., Inc., Riverton, N.J.*

For air shipment: polystyrene blocks in fibre pads

Another improvement in industrial packaging—also for shipping similar magnetron tubes—is employed by Raytheon Mfg. Co., Waltham, Mass. Designed primarily for air shipments, this package utilizes polystyrene blocks, rubberized fibre pads and a metal shielding loop, all enclosed in a wooden packing case to protect the product, and with these reductions: shipping weight, 67%; volume, 74%, and packaging cost, 58%.

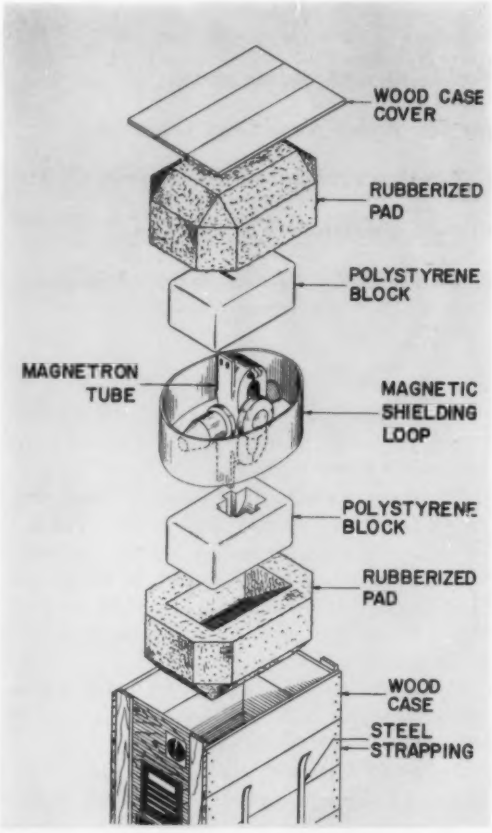
The metal shield, composed of a multilayer coil of grain-oriented, low-carbon sheet steel, prevents the powerful Alnico magnets in the product from affecting airplane instruments. It is reported that this packaging component can be omitted in surface shipments.

In the packaging operation, one molded polystyrene block is nested in a fibre pad in the nailed, wooden packing crate. The radar tube is then fitted into the plastic block, and a second block and pad are added. The metal shield is placed around the tube so it rests between the fibre pads.

No mounting bolts or special tools are needed for assembly and the case can be easily opened for inspection without destroying the packaging components. The company states that 180 tubes can now be packaged per working day, in comparison with 25 under the former wooden-case packaging.

In instances where the packaged tubes must be trans-shipped several times, these substantial savings in weight and volume are said to cut shipping costs by as much as $2 per pound.

SUPPLIES AND SERVICES: *"Dylite" polystyrene indexing blocks by DuVal Industries, Winthrop, Mass. Rubberized fibre cushioning by Lelanite Corp., Webster, Mass. Steel by Allegheny-Ludlum Steel Corp., Pittsburgh. Crates by Edwin Westerberg Co., Bradford, N.H.*



Shipping and magnetic guards are built into this air-freight package. The radar tube is gripped by polystyrene blocks and cushioned by rubberized fibre pads. A shield of low-carbon sheet steel prevents magnets in the product from interfering with delicate airplane instruments.

Die-cut sides turn folding carton into finger-grip dispenser-applicator for Kylon plastic tape. Transparent tape is cut to desired lengths by drawing non-adhesive side against serrated metal edge, thus avoiding gumming up of the cutting teeth.

LESS PACKAGE, MORE PRODUCT

Foil-laminated folding carton for new Kylon plastic tape is die cut to form an economical dispenser-applicator that gives consumers more value and saves 26% in packaging-material costs

A two-year search for just the right carton dispenser is beginning to pay off for Mystik Adhesive Products, Inc., of Chicago and its tough, new Kylon transparent plastic tape.

The company's packaging solution to several problems it faced not only saves 26% in cost of packaging materials, but also enables Mystik to give the customer more tape for his money. It also permits Mystik to market Kylon in a 1½-in. width not available in competitive package dispensers, in addition to the standard ¾-in. tape.

Mystik's experience demonstrates that new package development is the sum total of individual solutions to many problems.

Among the factors Mystik had to consider in perfecting a Kylon tape package were these:

The product. Kylon is a waterproof, transparent plastic tape, not a cellophane tape. Though the company has not revealed the basic plastic used, it is an imported oriented 1.3-mil film, perhaps polystyrene, reported to have more than nine times the tear resistance of cellophane tape. Such toughness is an excellent product quality, but it means the tape will not tear satisfactorily on a conventional package dispenser, especially if the cutting edge becomes gummy from deposits of adhesive.

The package. A competing metal dispenser is patented. Also, Mystik wanted inexpensive packaging for consumer rolls of tape.

The customer. Mystik found that existing transparent-tape dispensers are difficult to use as applicators. The question: Could a convenient package be designed that would make it easy for the customer to apply and cut the tape to desired length without touching the adhesive side?

Marketing. Mystik was already using thousands of counter displays in several styles for its cloth adhesive tape. The new package should be of a size to fit these display fixtures.

During the two-year development period the company examined more than 100 samples of dispenser packages created by eight different suppliers and ranging from metal dispensing containers and folding cartons to metal clip-on cutting edges.

In order to get its Kylon tape on the market, Mystik Adhesive Products initially used a non-dispensing carton that was simply an adaptation of its cloth-tape package. This is a foil-laminated paperboard sleeve that is cellophane overwrapped, with price printed on both the sleeve and the overwrap. In the meantime, Mystik concluded the search for an economical dispenser container.

The new package Mystik selected for marketing the two widths of Kylon tape is a foil-laminated folding carton equipped with a sharp, serrated, metal-edge cutting blade. The new folding carton for Kylon tape is designed for one-time use only.

Actually, the dispenser is a paperboard sleeve with three die-cut panels that fold inward to hold the roll of tape in place. Die-cut panels on opposite sides fold into the carton to form the core. The core serves as the axis on which the roll rotates and as a finger hold for gripping the carton in use.

The third die-cut panel also folds into the carton to serve as both the opening for the tape to pass through and as a guide for the roll of tape.

In use, the customer pulls the tape out through the opening slot and severs the tape on the metal cutter above the feeding slot. Because the non-adhesive side of the tape is pressed against the cutter, the blade remains sharp and clean. The location and design of the cutting edge permits the customer to use the box as an applicator.

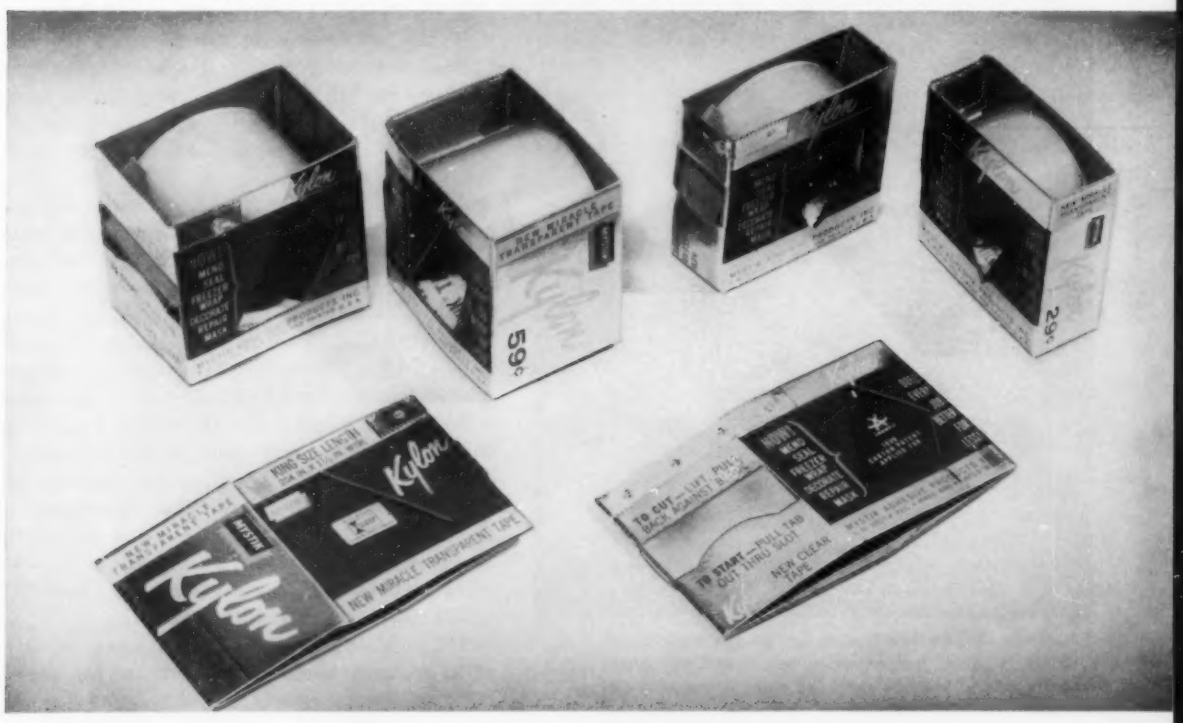
The bottom of the feeding slot is die cut with a rounded lip so that if the adhesive side falls back against the carton at this point, it will adhere slightly and be easy to use the next time.

The foil lamination provides a merchandising advantage as well as a functional surface against which the tape can touch and be removed without delaminating the carton.

The foil box has a gold-colored background with a design featuring the blue and white Mystik trademark and the Kylon logotype on a gray background. The price is pre-printed on both sizes of the cartons —29 cents for the ¾-in. tape and 59 cents for the 1½-in. size—and both contain 204 in. of tape.

SUPPLIES AND SERVICES: *Carton by Crowell Carton Div., St. Regis Paper Co., 1235 Williamson Bldg., Cleveland 9. Foil by Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19. Carton design by Westgate Graphic Design, Inc., 1103 Westgate, Oak Park, Ill.*

Two carton sizes are being used to launch Kylon plastic tape. In two cartons at left is a 1½-in. width not available in transparent tapes in competitive conventional dispensers. The ¾-in. tape (two cartons on right) is standard. Note three die-cut panels in carton flats (foreground). Panel below metal cutting edge is pushed into carton to form a guide for the roll and an opening for tape. Other die cuts form a center core to hold roll in carton and provide a convenient finger grip.



High visibility for Paris belts is provided by this polystyrene-domed folding carton in white and red with diagonal stripe. Design rated high in market research made prior to its adoption.

Market research found out what dealers and customers want in belt packaging, so a new polystyrene-domed folding box for Paris has the built-in handling and inspection convenience they asked for

VISIBILITY PLUS

Shopper inspection is made by lifting transparent lid. The belt is held in coiled position by foil-laminated paperboard bands, so that the entire item can be removed and replaced with little effort and no damage.

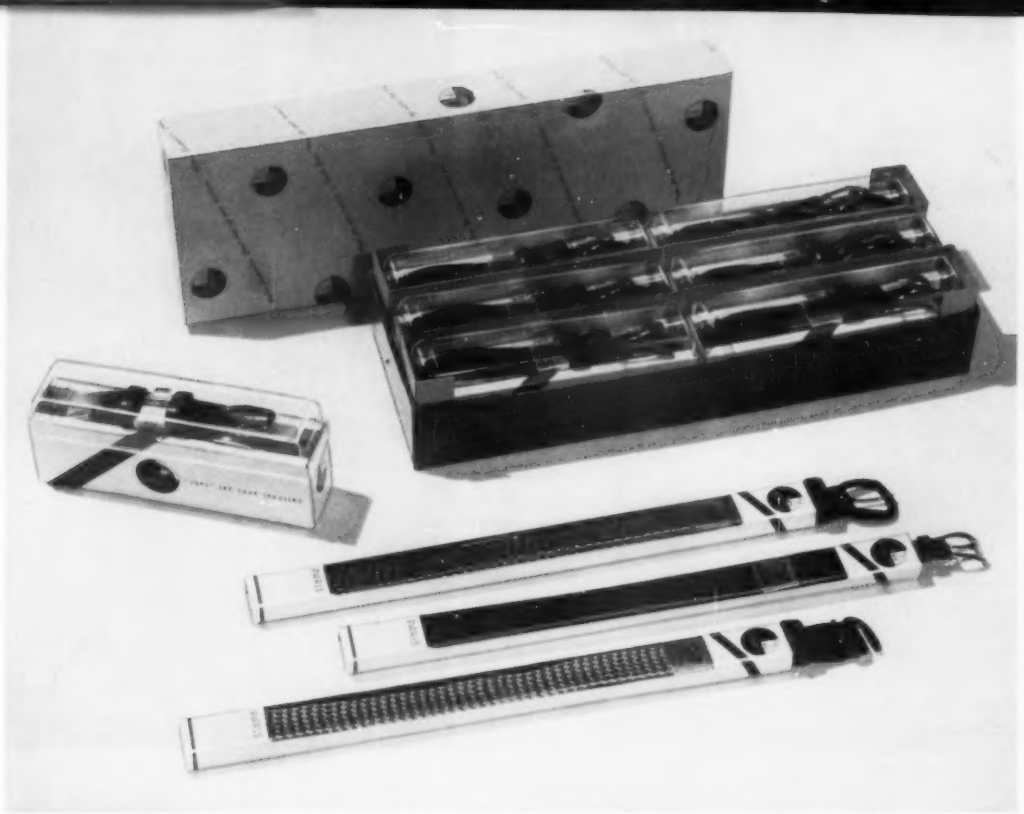
A new package for Paris brand belts has more in it than just the product, for A. Stein & Co., the Chicago manufacturer of the line, has also put into it six months' study and extensive market research of belt-packaging preferences, plus two important sales ingredients—appeal and convenience for *both* the dealer and the customer.

How successfully the company has met the requirements of both retailers and consumers by polling what they want and need is reflected in early sales results of this new transparent polystyrene-domed folding carton, which won a Merit Award in the 1958 Folding Carton Competition.* Volume is ahead of belt sales during the same period last year and the rate of opening of new retail accounts is the highest in the company's history, largely attributed by Paris executives to the new package.

It is significant that this important manufacturer was willing to invest so much time and money to find out what is wanted and needed in packaging this type of merchandise, because it was already using a polystyrene-covered box that, however, lacked several features of its successor.

Although the new package gives higher visibility to its contents, shoppers say they like the added

*See "Best Folding Boxes," MODERN PACKAGING, April, 1958, p. 140.



Matching design of paperboard-and-acetate sleeves for elastic and fabric belts (foreground) complements new domed package for leather belts (left). In rear is a carton for shipment of the new package in half-dozen lots.

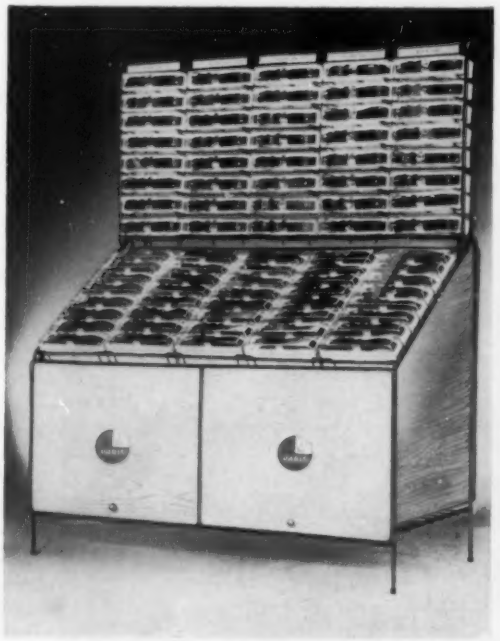
convenience of the removable "dome" that permits further inspection. Retail salesmen say this makes it possible to repackage the belt with little effort and no damage. They also say the package is easy to handle, display and stock in bins and drawers.

In the market-research program that led to revision of its packages after more than six months' work, the company first came up with a basic construction that met retailer wants, then clothed it in a design that incorporates strong customer appeal.

Without a "retailer's package," says a Paris executive, a belt is a slow item in the store. Research showed that a belt purchase is an impulse sale, that it is often made by women and that a packaged belt has greater appeal and connotation of quality than does an unpackaged belt hanging from a display rack. Thus, 100% visibility of a product through a package does not insure its sales success.

Paris knew that a package easy for the salesman to handle makes bigger [*Continued on page 187*]

SUPPLIES AND SERVICES: *Folding boxes by Ace Carton Co., 5800 W. 51 St., Chicago 38. Polystyrene domes by Cameron, Inc., 4611 N. Clark St., Chicago 40. Paperboard sleeving by Ace Carton Co., laminated with acetate by Arvey Corp., 3500 N. Kimball Ave., Chicago 18. Market research and package testing by Color Research Institute, 105 W. Adams St., Chicago 3.*



Combination display and stock rack offers self selection of Paris belts according to size. The two lift doors in front of this sturdy all-metal floor merchandiser display the company trademark and conceal additional stock.

Younger Knickerbocker

Point-of-purchase merchandising support is given to Jacob Ruppert Brewery's current advertising campaign for Knickerbocker beer by this 8-ft.-high paperboard cut-out of the company's youthful new trade character, "Knick Knickerbocker." The New York brewery's updated symbol, replacing "Father Knickerbocker," is calculated to suggest that the beer adds to the enjoyment of leisure-time activities in which young adults participate.

Lithographed in gold, blue, red and black, the die-cut unit is designed for use as the focal point of a mass display of the product in six-pack carry cartons. The life-size cut-out figure, dressed in an 18th-century costume, holds a stack of six-packs which towers above his head to draw shoppers' attention to the display from distant points in the store.

To be used in spring and summer promotions, the display unit has a sailing scene in the background. Similar pieces, with different backgrounds, will be used for autumn and holiday promotions. *Display by Einson-Freeman Co., Starr & Borden Aves., Long Island City 1, N.Y.*

Display Gallery

Fashion in supermarkets

High-fashion appeal for hosiery distributed through supermarkets and other self-selection outlets is the aim of a new package and a new floor merchandiser for Glen Raven Knitting Mills' Luron brand stockings.

The permanent, gravity-feed merchandiser is constructed of wood and metal. It contains a full selection of the company's hosiery in two-piece, re-usable, transparent polystyrene boxes. Color reproductions of photos of women in glamorous surroundings are printed on paper inserts placed under the covers of the snap-open boxes. Enlarged, backlighted transparencies of these photos appear in a strip at the top of the display. Above them is a hardboard header, silk screened in blue and gold, identifying the unit. Below, in transparent thermoformed blisters, are samples of the hosiery fabrics. To facilitate hosiery selection, price, size and style data are printed on a gold-colored, pressure-sensitive foil label at the bottom of each box as well as on runners across each shelf. Additional boxes are stored in the bottom of the floor stand. *Display and package developed by William Melish Harris Associates, Greenwich, Conn.*

Cargo of cookies

To stimulate impulse purchases of its line of bagged cookies, the Keebler Biscuit Co., Philadelphia, has adopted a colorful corrugated "Treasure Ship" floor merchandiser for placement in self-selection stores.

The die-cut, bin-type display unit, lithographed in yellow, brown, blue and white, holds in jumble style up to 40-doz. bags of the company's seven different cookie products. Design elements on the merchandiser, which conforms roughly to the shape of an old-time armed wooden merchantman, include an anchor, a lifeboat, cannon projecting from gunports and a rope ladder. For fast brand recognition, the company name is spotlighted on a panel in the ship's bow.

A printed paperboard sail, featuring the word "sale" in big block letters and with ample space for price marking, is secured to the ship's fibre tube "mast" via a slot in the tube.

Completing the ship display's nautical theme is a die-cut reproduction of a photo of an attractive model wearing a sailor cap. She is shown "standing forward watch." *Display by Ohio Boxboard Co., Rittman, O.*

Display Gallery

A tested appeal

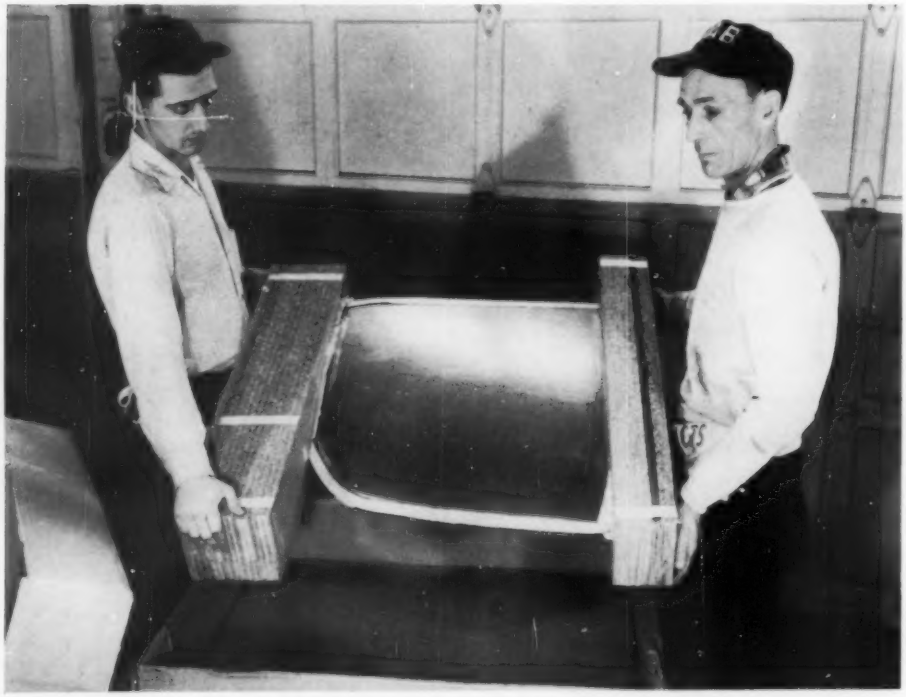
Last year, when Shulton, Inc., offered its Old Spice brand men's toiletries in a special display unit, retailers who were given the merchandiser registered a 41% greater sales volume on the products than a control group of stores that did not receive the display. Based on that experience, the company this spring is introducing a similar display piece to stimulate sales of after-shave lotion and stick deodorant.

Made of corrugated board, the slender floor merchandiser can be placed against a wall or at gondola ends. An economy factor in the production of the display, the company says, is the use of a silk-screened facing. The display base is printed in navy blue, with design elements confined to the company logo and its Clipper Ship trademark. A stepped shelf projecting at hand height from the base of the unit holds 48 individual cartons of stick deodorant and 24 of the company's after-shave lotion in bottles.

To spur impulse buying, a red-and-white printed header board highlights a die-cut reproduction of the new applicator package and gives prominence to price data. *Display by Color Process Co., 220 S. 40 St., Philadelphia.*

Cushioned in corrugated

To ship its fragile plane parts, Grumman Aircraft builds lightweight containers out of special triple-wall board and saves 40 to 65% on cost, weight, storage and handling



Sandwiched in special contoured braces, formed from laminated strips of triple-wall corrugated board, a Plexiglas airplane windshield is placed in form-fitting case constructed of same ½-in.-thick material. This 25-lb. container saves 65% in packaging costs by replacing a 47-lb. veneer and wood-frame case.

By building its own super-strong lightweight shipping containers with triple-wall corrugated board, Grumman Aircraft Engineering Corp., Bethpage, Long Island, N.Y., has lowered packaging costs, simplified inventory and reduced both storage space and materials handling—all by 40 to 65%.

The firm produces aircraft for the Government and it also packages and ships aircraft replacement parts throughout the world.

Because of its cushioning property, the triple-wall containers have enabled Grumman to discard the previous heavy and laboriously assembled plywood and lumber containers that frequently weighed twice as much as the product.

Of course, there have been numerous examples in recent years of changes from wooden cases to corrugated board with various wall constructions. Many of these, however, require some product rigidity to help sustain the package.

In the case of Grumman, the light aluminum fabrications, which are particularly prone to damage, give little support to the package and the range of shipment and manner of handling make severe demands on the package. Thus, the fact that Grum-

man has not received any complaints about product damage since the change-over should be of particular interest to packagers handling fragile industrial and consumer products.

The ½-in.-thick material is a seven-layer construction containing one wall of C-flute corrugated and two A-flute layers faced on both sides. It is received by Grumman as flat stock, pre-cut and scored for forming into two-piece, telescoping packing cases. The company makes up its shipping cases as needed, employing a special stapling machine developed jointly with a supplier. The elimination of nailing and steel strapping has cut by half the manhours needed for case construction.

At first Grumman experimented with a glued carton, but too much time and space were necessary to set up the glued containers. Also, a glued shipper must be virtually destroyed to inspect the contents, which is a necessary procedure at shipping points. Therefore, the company has adopted a filament tape to close the new cases, yet permit opening and re-sealing without damage.

The company found that the re-use value of these cases consequently is high and, according to Grumman officials, a great many packages have been recovered in first-class condition after having undergone trips totaling thousands of miles.

This is possible because of the case construction as well as the inherent cushioning properties of the corrugated material. In the bottom half of the carton the flaps are stitched on the ends; the upper half is stitched on the sides. Thus, 1½ in. of corrugated material surrounds the product, gently cradling the dent-prone aluminum parts.

For many small items, the master shipping case serves as a bundling device for multiple shipments. In the case of such larger products as hatch and wheel doors, fairings and panels, and Plexiglas windshields, dunnage has been eliminated and the parts are suspended on custom-contoured supports constructed from laminated strips of the triple-wall corrugated. The parts are sandwiched in these shock absorbers and fastened with filament tape.

With experience in using corrugated containers, Grumman has greatly simplified its inventory and operations. All of the diverse shapes and sizes of parts manufactured by the company can be packaged with only 11 basic boxes. The telescoping construction aids this standardization, since it introduces flexibility in the depth of cases and allows one case to stand for many products.

This standardization promotes fast assembly of the shippers, too. Twenty-five to 100 completed containers are always in stock, with 100 to 150 in the process of construction. As a result of this system, there is another reduction of 50% in the paperwork required to keep track of the company's packaging materials and finished goods on hand.

SUPPLIES AND SERVICES: *"Tri-Wall Pak" corrugated board by Tri-Wall Containers, Inc., 799 Washington St., New York 14. Stapling machine by Saranac Machine Co., Benton Harbor, Mich.*

Special stapler fastens the thick corrugated, which is first folded and clamped into position. Since flaps alternate in position on tops and bottoms of cases, at least 1½ in. of corrugated surround product.

Owens-Illinois Assures You A Complete Packaging Approach

Co-ordinated Research

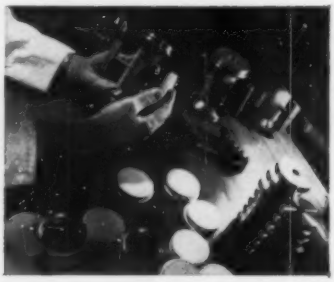
Pure research into fabrication of glass, *packaging research* into processing and handling methods in customer plants, *market research* into consumer attitudes. All add up to greater packaging value.

Engineering Design

At Owens-Illinois, your package's *three* needs are taken into account: 1) Considerations of its function in the retail store, 2) its operating efficiency, and 3) its consumer utility.

The Right Container

There's an O-I container to meet your special needs: Duraglas containers; Libbey Safedge packing tumblers or premiums; Kimble Ampuls and Vials; and a variety of plastic containers.



The Right Closure

Through long and continuing research O-I has developed the most advanced metal and plastic closures. Helping you choose the right closure is another function of O-I's packaging service.

Needed Fitments

O-I specialists are keenly aware of sales benefits derived from plastic shaker and pour-out fitments which are not "gadgets" but which increase consumer satisfaction with your product.

Merchandising Cartons

Modern cartons developed to serve you efficiently in the retail store and warehouse . . . as well as on your own filling line and in transit. This is the new opened carton with easy-open flaps.

They're easy to store, easy to use, when packed in glass

For a brighter, lighter life... so many wonderful household products are packaged in glass

TODAY'S work-saving household products such as window cleaners, bleaches, waxes, polishes, liquid detergents, and many others, make housekeeping an easier job.

Packaged in glass, these products not only look more attractive, for faster sale—but are simple to handle and provide maximum assurance of protection. It is the unique quality of *inertness* that enables glass to protect such an astounding *range* of products so valuable and useful in every-day life.

Owens-Illinois continually works to produce better, stronger, more sales-attracting glass containers for you and your customers... gives you a complete sales-package, from container design, closure or fitment, eye-catching label, to merchandise carton. Call the Owens-Illinois office nearest you for the Duraglas Container to help sell... and continue to sell... your product.

DURAGLAS CONTAINERS
AN (O) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO

New integrated design for these typical Wilson products now features the company's new waiter trademark, white backgrounds, bold product names, colorful gingham pattern. About 80% of Wilson's top line of products now carries this format.

FOR 2,000 PRODUCTS:

Four years ago Wilson & Co. had a galloping case of over-prolific packaging. For its 2,000 products, this Chicago-headquartered meat packer was using 13 different trademarks in a variety of packaging designs sponsored by 15 autonomous department managers for innumerable packages ordered to suit the individual specifications of each local plant.

Today the company is four-fifths of the way through a thorough trademark and packaging overhaul that centralizes these key operations in what is otherwise a decentralized corporation. Now one trademark will replace 13 and a few basic package-design features will be variously combined for each product container, but used company-wide.

Wilson's story of why and how it developed more-unified packaging should help other organizations wanting to preserve or present package uniformity in the marketplace while operating a decentralized business back at the plants.

This packaging overhaul was sparked by top management. The four-year-old program started when Wilson president, James D. Cooney, decided that packaging and other merchandising practices should be looked at in the light of changing marketing conditions. Mark Cox was named advertising director and he assigned art director, Bob Berns, to make a thorough study of Wilson's packaging. Berns' findings were not complimentary: "This company has

poor trademark recognition and one of the most unattractive color patterns for packaging in the entire industry, or possibly the country," he reported.

Such sharp criticism from a free-lance designer or some other outside "expert" may be easier to accept than one coming from within the corporate family. Conversely, internal evaluation can be harder to sell than an outsider's "unbiased" opinion. However, calling the dress of his company's products antique was just the beginning for Berns.

His review not only convinced him that a packaging change was necessary, but revealed that Wilson faced eight major related problems:

1. *Status quo.* The old line's colors had been in use so long that many department managers were reluctant to approve a change. "But we've done it this way for years" is a standard reaction.

2. *"Experts."* With 15 different and skilled department managers, Wilson had a history of package designing within each department and of local plants making demands for its own package designs.

3. *Inventories.* Supplies of existing labels and cartons at Wilson's many plants had to be checked for value and to determine how fast new packages could be moved into use.

4. *Advertising.* New packaging could upset the entire advertising program unless a plan were laid out to apply the new design throughout the line.

5. *Point-of-purchase materials.* Stocks on hand and featuring current-package illustrations totaled nearly $100,000. This would influence the speed with which the company could move.

6. *Rolling stock.* Hundreds of trucks and fleets of railroad cars would have to be repainted to con-

Bucking departmental tradition and prerogative, Wilson & Co. is 80% through a company-wide packaging overhaul and centralization sparked by top management's decision to match changing marketing conditions

New trademark replaces 13 old ones.

A SINGLE TRADEMARK

'Dancing letters' are dominant feature of new labels for canned meats (far right), contrasting with formalized, horizontal layout of old label.

Seven-color product illustration is used on new wrap for Wilson's famous Tender Made ham. Note here the subdued use of the gingham motif.

form to any new design. Costs could prohibit a drastic color change on rolling stock.

7. *Sales.* Volume could hinge on the effectiveness of the new package design. Many of the 15 department managers, reluctant to abandon "old friend" packages in favor of an unknown design, assumed a "show me" attitude.

8. *Trademark hodgepodge.* At that time (1954) Wilson had 13 trademarks. Though it began to advertise its bar "W" in 1916, few products still carried it. The multiple marks reflected the independent packaging decisions of decentralized operations.

Obviously, no packaging-design change could be made overnight.

The first problem was to demonstrate the need for a single company trademark and to create a new one. Berns, wanting to move swiftly, completed in a week a public survey of trademark recognition. Using members of Wilson's market research department, he armed a battery of interviewers with printed reproductions of Wilson's and other companies' trademarks with company names blocked out. They took the public's pulse at Chicago's Midway Airport. A later check found that the sampling reflected a good economic and geographic cross-section of the country.

To help convince product managers that packages should not suit their personal tastes but instead must fit into a family package design, a slide presentation was prepared which showed that two of the most widely used Wilson trademarks received only 31% recognition. On the other hand, personalized trademarks like Aunt Jemima (98%) and design devices using initials, as in International General Electric's logo (100%), are well remembered.

As a result, company personnel recognized the need for better corporate identification.

First, a new trademark was developed. Using a personal character combined with a strong initial, the new symbol is a waiter's face and hands which hold a platter supporting a large "W," all set against an orange triangle. Blue has been eliminated.

The new mark got a mixed reception initially, although all managers agreed that a single identification was better than having a corporate split personality with several trademarks.

This step was only the beginning. New package designs had to be created that would give individuality to each product, yet fit into a family pattern.

Already established on many packages was a gingham background design. However, it was believed that gingham behind a logotype was confusing. And it reproduced poorly on television.

After a thorough study of the competition, plus innumerable tests of suggested package designs, Wilson's art department came up with a basic format which it is now applying to all its top "certified brand" packages.

An over-all white background has been given to most labels to connote a pure and fresh quality product. Product name is printed in powerful artwork type, often using "dancing letters." Appetite-appeal illustrations are included wherever possible.

The gingham pattern is retained, but given a subordinate role. It is used only as an added element and never behind the product name. And the new trademark is kept small on most packages.

Along with the design change came unification of the packages themselves. The old practice of plants retaining a previously designed package in preference to a new, more-effective format was modified so that packages for a single product are becoming similar throughout the company. Previously, bacon might be wrapped in foil, a paperboard carton or a sleeve, depending on "local marketing conditions." However, where a strong regional preference actually exists, special packages are even today retained.

Design changes were made for fast-moving products and for packages with low inventories. Basic lines were converted one at a time under the technical direction of Robert Vogelgesang, head of Wilson's package and supply department.

Thus, Wilson is solving the eight basic problems it identified at the beginning of the redesign project. Sales managers know now that advertising is more effective through a unified packaging design and a single corporate trademark. Changes were made as inventories of packages and display materials dropped. Refurbishing rolling stock will take longer.

Though it is almost impossible to attribute any definite portion of sales improvement to the new packages, Wilson is glad, in view of today's tightening economy, to have the added sales impetus of a unified and coordinated family packaging design.

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Van Leer Industries, Ltd., Seymour House, 17 Waterloo Place, Pall Mall S. W. I, London, England

Halofluorocarbon plastics

Ultra-low permeability of transparent, heat-sealable film and tubing justifies their use in high-performance packaging applications

By Richard A. Smith, Julian H. Kushnick* and Herman S. Kaufman†*

Halofluorocarbon plastics currently available in the form of tubing, film and molded shapes provide the pharmaceutical, chemical, cosmetic and food industries with a unique packaging material combining for the first time certain long-desired properties.

The packaging field has need for a transparent, heat-sealable material with ultra-low permeability to moisture and oxygen. Thermoplastic film and tubing fabricated from halofluorocarbon plastics answer this need, as they combine virtually zero water and oxygen permeability with optical clarity and easy-sealing qualities.

In addition, there are many bonus features, as the plastic is flexible and tough, and offers extreme resistance to the effects of aging as well as high and low extremes of temperature.

Of specific interest to the pharmaceutical industry is the fact that "Kel-F"[1] halofluorocarbon resins are available which permit sterilization by autoclaving and by radiation. Products packaged in these resins and sterilized by both these techniques are currently available on a commercial scale (1).[2] The know-how, materials and equipment for translating the desired properties of the resins into a finished package are here today.

Figure 1 illustrates the use of Kel-F plastic material in five different types of packaging applications.

Halofluorocarbon resins of the Kel-F brand are offered in several grades, of which two are of special interest for packaging applications. Kel-F resin, Grade 500, is specifically suited to radiation sterilization. This resin maintains its excellent physical properties even after a radiation dose of 20 megareps, which is far above the normal 2-3 megarep dose required for sterilization. When conventional steam-sterilization techniques are preferred, the products prepared from Kel-F resin, Grade 270, are recommended. This material may be safely steam sterilized without distortion or loss of properties.

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[1]"Kel-F" is the registered trademark of Minnesota Mining & Mfg. Co. for its halofluorocarbon products.
[2]Numbers in parentheses identify References appended.

General properties

Table I shows typical properties of these two grades of Kel-F resin: Grade 500 and Grade 270.

Permeability. Many important packaging applications for halofluorocarbon polymers demand a high degree of impermeability to liquids and gases. In the 3M laboratories and through a fellowship at the New York State College of Forestry, Syracuse, a number of permeability constants have been measured. These constants are useful as a means of predicting the performance of halofluorocarbon plastic articles such as tubing, film and moldings in packaging applications. Currently available data for Kel-F resins are shown in Table II, with constants for other plastics selected from the literature.

There are many instances where measurement of permeability in the true sense is so difficult that a simplified procedure must be used. The relative permeabilities of a variety of chemicals through Kel-F resin Grades 270 and 500 have been determined. Tubing, approximately 0.50-in. O.D. and 0.005-in. wall thickness, was extruded, cut into 4-in. lengths, pulse sealed at one end, half filled with the chemicals and then sealed at the other end. Dupli-

Table I: General properties of Kel-F halofluorocarbon resin Grades 270-300 and Grade 500

Physical properties	*Kel-F plastic Grade 270*	*Kel-F plastic Grade 500*
Specific gravity (D-792-48T)	2.12	2.10
Tensile strength (D-638), 25°C., psi	4600-5700	4500
Yield point (D-638), 25°C., psi	3640	4090
% elongation (D-638), 25°C.	125-175	150-180
Impact strength—Izod (D-256), ft.lb./in. notch	3.6	No break with 30 lb. hammer
Hardness, shore D (D-676), 25°C.	80	73
Abrasion resistance Fed. Spec. (L-P-406-a method 1091) 57,3753 g quenched (loss in g./1,000 cycle)	0.0175	
Resistance to heat (continuous) °F.	390	390
Water absorption (D-570-42) %	0.00	0.00
Burning rate	Nil	Nil
Effect of sunlight	None	None
Effect of strong and weak acids; Effect of strong and weak alkalis; Effect of organic solvents	Generally unaffected. Halogenated compounds cause slight swelling	
Machining qualities	Excellent	
Clarity	Transparent in thin sections	
Color possibilities	Unlimited	
Radiation resistance	Embrittles at about 8 megareps.	Embrittles at about 24 megareps.
Molding and extrusion characteristics	Excellent	Excellent

cate samples were suspended in the normal laboratory atmosphere (approximately 25 deg. C. and 50% R.H.) and weighed periodically. Losses in weight were plotted against time and permeability constants calculated from the steady-state rate of permeation. Results (p) have been expressed as gms./100 in.²/day.

Currently available data are listed in Table III. In those cases where p is shown as zero, no weighable losses were detected in at least 90 days.

As an example of the practical utilization of the low-permeability properties of Kel-F plastics, there is the work reported by Nelson, Hu and Steinberg (2). The authors started with nine plastic films: Pliofilm; low-density polyethylene; cellophane; Tygon S22-2; vinyl blood pack; Saran A517, 200-gauge; Mylar polyester A 200; Trithene[3] A 200, and Teflon 500. In the first screening test (30 min. in boiling water and 30 min. in steam at 250 deg. F. and 15 psig), Pliofilm, polyethylene and cellophane broke apart or delaminated. These films were eliminated. In the second test, the remaining six films were tested for organoleptic (taste and smell) properties after 30 min. in boiling water. Trithene A, Mylar A and Teflon were best.

Teflon was eliminated from further consideration because of inability to heat seal. More extensive tests were continued with Trithene A and Mylar A. The most important results obtained from these tests were the following:

1. *Water-vapor transmission.* Trithene A had a very low WVT rate, about 3% that of Mylar A and 22% of Saran A517. This advantage was maintained after a 30-min. period of exposure to heat at 212, 230 and 250 deg. F.

2. *Gas permeability.* The oxygen and carbon-dioxide permeabilities of Trithene A and Mylar A were very low, with Trithene giving slightly superior results in both cases.

3. *Packaging of acid foods.* The WVT results measured directly were compared with the weight loss of apple-sauce packages after 10 weeks' storage. Again, Trithene A was superior to Mylar A.

Sample	*Gm./100 in.²/24 hrs. Wt. loss apple sauce*	*Wt. loss water in dish*
Mylar A 200	6.74×10^{-1}	5.88×10^{-1}
Trithene A 200	13.1×10^{-2}	8.26×10^{-3}

To prevent browning of the apple sauce, it was necessary to add 300 mg. ascorbic acid (a widely used food anti-oxidant) to both the Mylar and Trithene packages. Apparently, even the low level of O_2 permeability was sufficient to discolor the apple sauce during the 10-week storage period. However, the use of anti-oxidants is very common and in many cases its use is necessary in order to protect foods prior to as well as after packaging.

Tomato juice packaged in Trithene A remained brighter than juice packaged in Mylar A.

4. *Organic-vapor permeability.* Methyl furoate is an important ingredient of food products related to odor and taste. Tests showed Mylar A and Trithene A to be 5,000 times less permeable to organic vapors than cellophane PT-450, which transmitted 0.6 gms. furoate per 100 in.² per 24 hours.

Molecular-weight control

Kel-F resins are characterized by high melting points and high viscosities above the melting point. High temperatures are required for molding and

[3]Trithene is unplasticized film made of Kel-F resin, Grade 270, by The Visking Corp. as layflat tubing.

extrusion—so high, in fact, that there is always danger of overheating, with resultant excessive degradation. The zone of safe operation between "cold molding" and thermal breakdown is especially narrow for thin-wall extrusions such as film or tubing used in packaging operations.

One property which can be depended upon for quality-control purposes to tell us whether we have stayed within this "zone" is molecular weight. Direct measurement of molecular weight is basically a research-laboratory job. But indirect methods are available for Kel-F resins which are simple enough in equipment and procedure to be used with confidence in the control laboratory or even in the fabricating shop itself.

For routine control purposes, the quickest, most reliable technique is what is known as the "zero strength time" (ZST) test.

In this method a notched, molded specimen is placed under tensile load in a fixed-temperature oven. The time, in seconds, for the loaded specimen to break is measured. The ZST method has been adapted to semi-automatic operation for rapid, routine control. It has been included by ASTM in the recently issued specifications for polychlorotrifluoroethylene (D1430-56T) and is being studied for use with other plastics such as polyethylene.

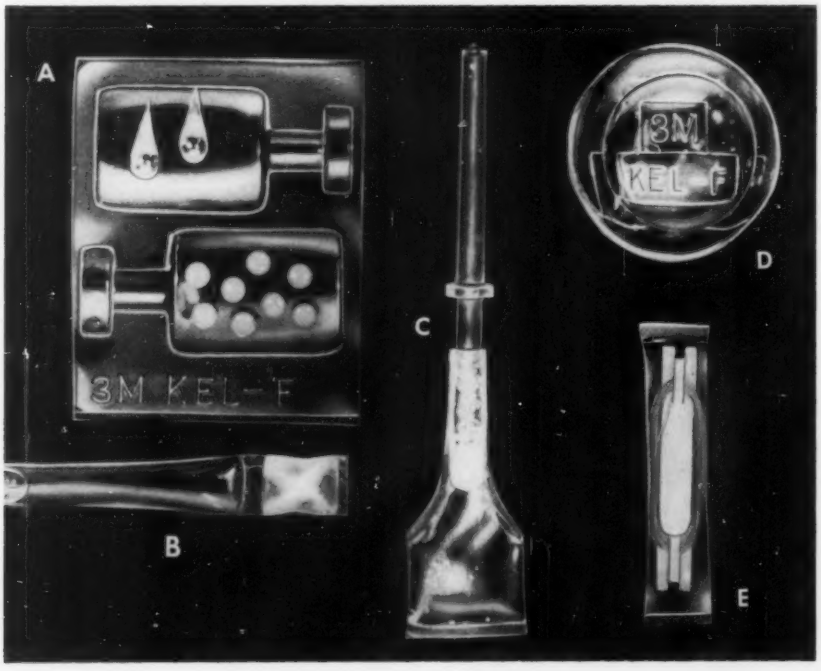
Kel-F resin Grade 500 for extrusion is sold at a high molecular weight level indicated by a ZST of 220 to 265 seconds. Extruded tubing used successfully in radiation-beam sterilized packages runs at a minimum ZST of 140 seconds. In early experimental work, tubing with ZST of 90 to 100 sec. failed to retain satisfactory strength after irradiation due to the appreciable molecular degradation indicated by the low ZST.

Adherence to recommended molecular-weight standards for molded and extruded Kel-F plastic products will go far toward guaranteeing satisfactory performance. Ignoring such standards will lead inevitably, of course, to product failure.

Fabricating techniques

Kel-F resins are sold as basic materials for fabrication in standard equipment by extrusion, injection, transfer and compression molding. Colorless and translucent to transparent in its natural state, the plastic may be blended with fillers and coloring agents as desired. Kel-F resins may be easily machined, engraved, cut, drilled, punched, sanded or

Figure 1. Illustrating use of Kel-F halofluorocarbon plastics in packaging (A) coated tablets and a liquid solution in a two-part vacuum-formed container; (B) a liquid and a solid in two compartments of extruded tubing; (C) combined sterile liquid pack in single-use disposable hypodermic syringe; (D) liquid in a bubble pack; (E) catgut suture in antiseptic solution in extruded tubing.



polished to required dimensions and finishes. As true thermoplastics, these resins may be formed by vacuum draw and drape methods, and they may be joined by either mechanical, heat-sealing or radio-frequency (RF) techniques.

It is interesting to note that Kel-F resin lends itself to bottle making by the standard blow-molding process and a variety of different containers are made by this process.

The high molding temperatures (450-650 deg. F.) needed for Kel-F resins require that care be exercised during processing. However, the techniques currently available to experienced molders result in high-grade finished products. Thin-wall tubing and film are of greatest interest to the packaging engineer and these materials are currently available to industrial users from a variety of sources.[4]

Sealing film and tubing

There are three principal methods of sealing Kel-F thermoplastic film or tubing: (1) thermal impulse, (2) hot jaw and (3) radio frequency.

1. *Thermal-impulse sealing.* Thermal-impulse sealing of thermoplastic film depends on the momentary application of a high temperature to the film held between two relatively cold jaws. The temperature is attained by a surge of electrical current through a nichrome ribbon near the surface of each of the jaws. Precise, automatic control of current flow and heating time is required. Control of jaw pressure is also necessary. Since the jaws which hold the film do not have time to get hot, the sealed joint is automatically quenched while it is held in place. Automatic timing control of "hot" and total dwell is necessary for production work. Uniform quench action in production is assured by cooling the jaws. The quenching of the Kel-F plastic seal controls the degree of crystallinity and produces a relatively amorphous seam with a minimum of embrittlement. Seams made by this method are being produced commercially; the seams are of a high-grade, uniform character with less than 0.1% rejects. A commercial sealing unit which meets all requirements is now commercially available.[5] Typical sealing conditions are:

Material: 5-mil film to 5-mil film
Pressure: 10 psig
Electrical: 7 amp.
Hot dwell: 10 sec.
Total dwell: 25 sec.

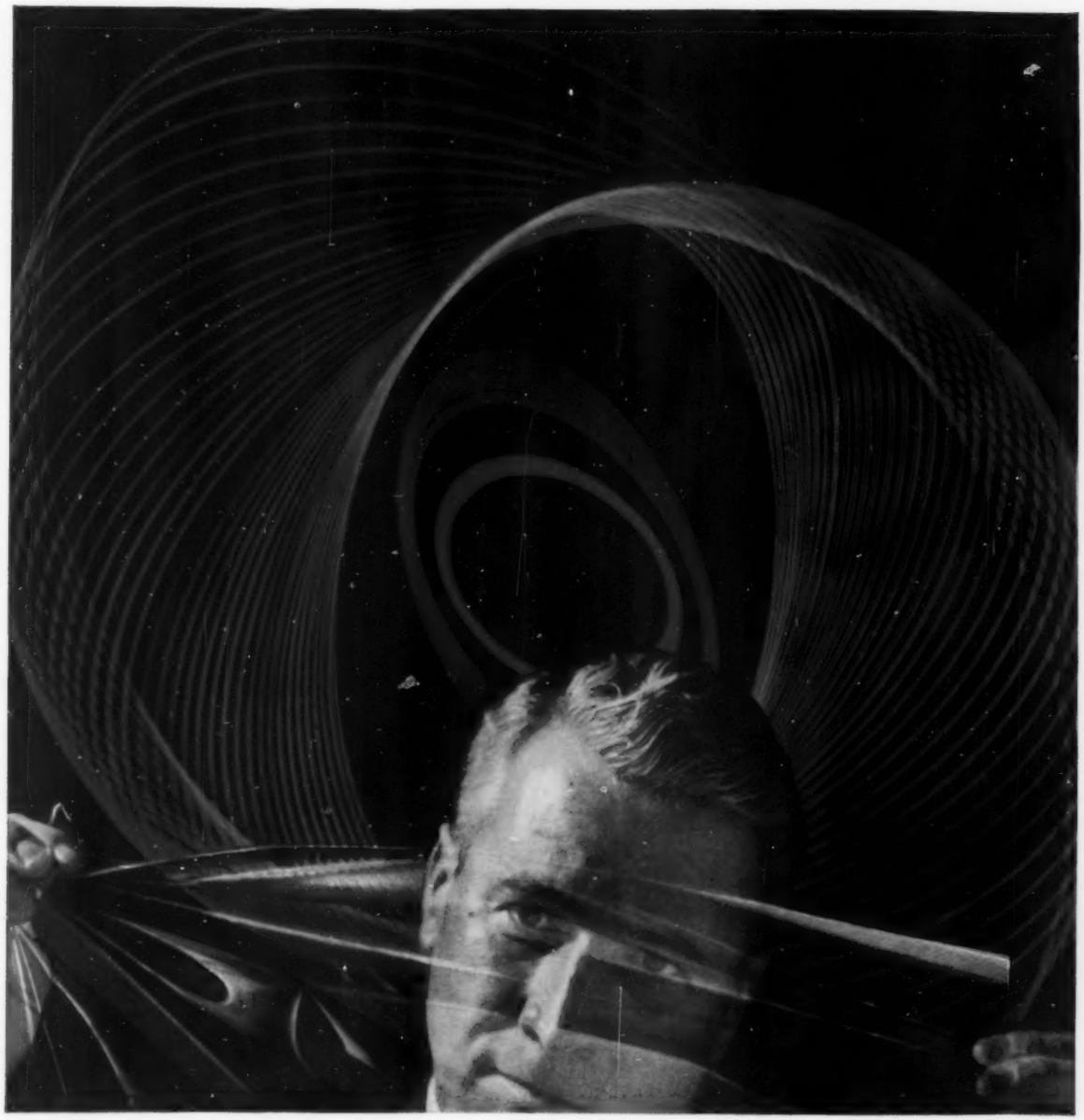
2. *Hot-jaw sealing.* This method of sealing film utilizes a jaw or tool which is hot at all times. Such a tool must be thermostatically controlled. Automatic control of time, temperature and pressure is required. The time required to effect a seal depends on such factors as the uniformity of contact of the film with the tool, the molecular weight of the plastic, the degree of plasticization (if any) of the plastic, the heat losses involved and the previously mentioned variables of time, temperature and pressure. The time of sealing varies from as little as 5 sec. for 2-mil film to as much as 10 min. where the film is

[4] Wisking Corp., Terre Haute, Ind.; Sanford Plastics, Inc., Matawan, N. J.; Carmer Industries, Kenilworth, N. J., and W. S. Shamban & Co., Culver City, Calif.

[5] Sentinal thermal impulse sealer, Packaging Industries, Inc., Montclair, N. J.

Table II: Permeability constants ($Px10^{10}$) of Kel-F resins (P=cc.[STP]/cm.²/mm./sec./cm. Hg.)

Gas	*Temp. °C.*	*Kel-F resin Grade 300*	*Kel-F resin Grade 500*	*Kel-F resin Grade 800*	*Polyethylene*	*Nylon*	*Polyvinyl chloride*	*Polyvinylidene chloride*
N_2	0	...	...	0.03	...	...	...	...
	25	0.05	0.11	0.30	...	...	...	...
	50	0.30	0.52	3.4	...	...	...	...
	75	0.91	2.9	13.0	...	...	...	...
O_2	0	0.07	...	0.46	7.0	0.1	...	...
	25	0.40	0.22	2.1	31.0	0.3	1.0	0.1
	50	1.4	1.9	5.8	107.00	...	...	...
	75	5.7	7.7	24.0	...	...	...	...
CO_2	0	0.35	0.11	0.19	68.0	0.3	...	...
	25	1.4	0.80	1.8	190.0	...	10.0	3.0
	50	2.4	5.2	15.0	440.0	14.0	...	...
	75	15.0	20.0	71.0	...	...	...	...
H_2	0	3.2	...	...	...	...	...	...
	25	9.8	...	...	...	...	...	...
	50	24.0	...	...	...	...	...	...
H_2S	50	0.35	...	...	...	...	...	...
	75	2.0	...	...	...	...	...	...
H_2O	25	1.0	...	...	60.0	1,400.0	1,600.0	15.0
	50	10.0	...	...	...	...	...	...
	75	28.0	...	...	...	...	...	...
	100	100.0	...	...	...	...	...	...



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heavier and on a heat-conducting surface. Seals made by this method are not quenched automatically and a second operation is necessary to effect a quench and to attain a high-grade seal.

Good seams can be obtained by hot-jaw sealing, but the simpler procedure of thermal-impulse sealing has largely superseded the method.

3. *Radio-frequency sealing.* With this type of sealing, the films are used as a dielectric under pressure between two electrodes. The rapidly changing applied field induces internal heat throughout the plastic and fusion at the plastic interface occurs. RF generators and sealing presses in the 27-30 megacycle range with outputs of approximately 3 KW are commercially available and can be used for sealing Kel-F plastic. Seals may be of any configuration. At this frequency, a layer of phenolic board is used on one electrode (the base of the press) and a layer of 3M electrical acetate or polyester (#5) tape is used on the other electrode (a bar die). These materials are called "buffers" and serve the dual purpose in different degrees of slowing heat drain from the plastic and of imparting heat to the plastic by reason of internal heat which is formed in the radio-frequency field.

Vacuum forming

One of the most important new tools for plastic fabricators is vacuum forming; it is a means of forming plastic film or sheet into new shapes by means of heat, vacuum and mechanical aid. The economic advantages of the process are that vacuum-forming equipment (as contrasted to injection-molding and extrusion equipment) is relatively inexpensive; the molds are one piece and they are quickly and easily changed; relatively inexpensive short runs become economically feasible. High-production equipment to produce 300 to 500 units per minute is available. Plastic packages produced by this technique are widely used and well known in the packaging industry.

Kel-F plastic sheet and film lend themselves readily to vacuum drape and plug techniques and no particular difficulties arise. Commercial vacuum-forming equipment can be used with no modification. The plastic has been vacuum formed in thicknesses from 2 to 40 mils. Areas of film with multiple shapes can be made (even continuous film can be used); units can be separated by forming RF tear seals, or by the use of slitting cutters, clicker dies, dinking machines, high-speed cutting dies, etc.

Labeling and printing

An attractive feature in the use of Kel-F resins for packaging materials is the possibility of printing and marking directly on the plastic. Kel-F brand printing inks are available from the Minnesota Mining & Mfg. Co. in two distinct types: an air-drying series and a heat-setting series. Both types are outstanding for their ability to adhere to plastic surfaces such as polyethylene, nylon, rigid and plasticized vinyls, as well as to Kel-F plastic. They are produced in a range of standard colors from pigments selected for their clarity, brilliance, and heat and light stability. These inks are applied by conventional procedures as follows:

Rotogravure printing. High color strength and easily adjustable viscosity make the Kel-F inks eminently suitable for printing plastic film by the rotogravure process. Kel-F plastic films should be driven positively to provide good register. Maximum adhesion depends on complete solvent removal.

Offset printing. Kel-F inks have been used successfully in offset printing of plastic films, with a polyvinyl-alcohol blanket acting as a transfer medium from inking roll to plastic film.

Stamp-pad printing. Kel-F inks can be applied to plastic film successfully from a saturated stamp pad, using raised rubber type.

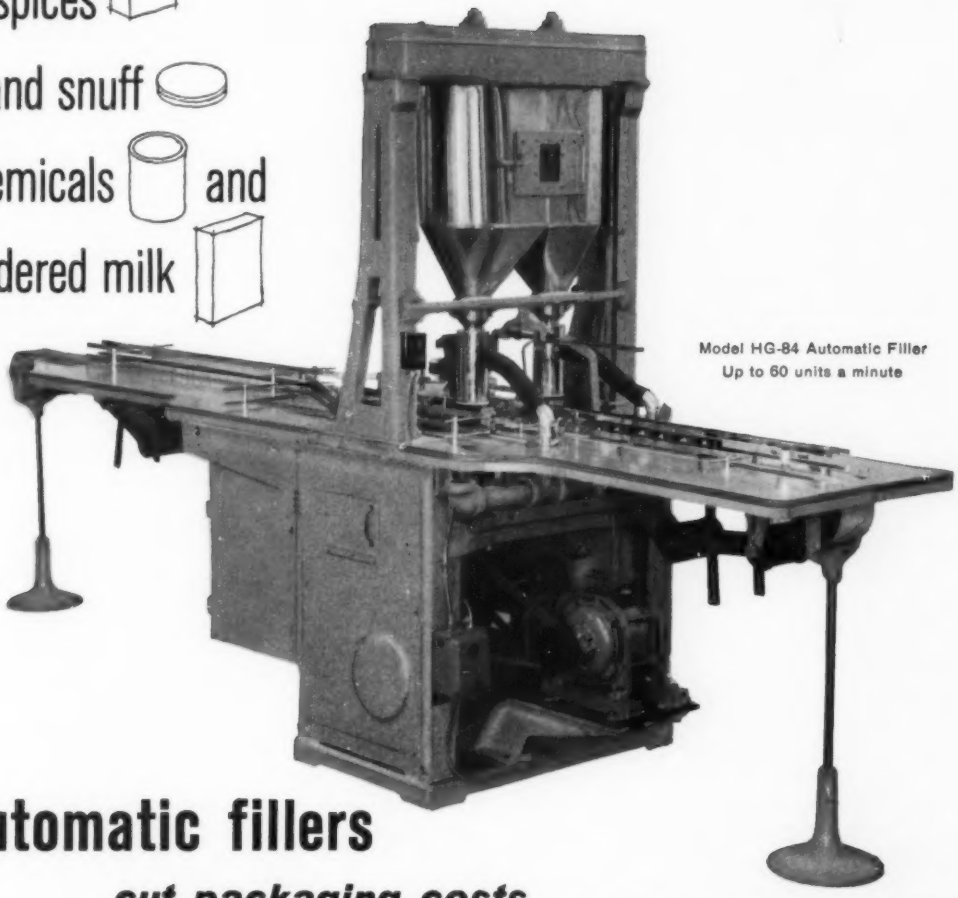
Silk-screen printing. Kel-F inks have been applied successfully to packaging materials by squeegee action through a silk screen. [*Continued on page 177*]

Table III: Relative permeability constants of Kel-F resins (gms./100 in.^{2}/day—5-mil-wall extruded tubing—25°C.)

Chemical	*Kel-F resin Grade 500*	*Kel-F resin Grade 270*
Distilled water	0.00*	0.00
Acetone	0.03	0.05
Methyl ethyl ketone	0.20	0.15
Methanol	0.00	0.00
Ethanol	0.00	0.03
37% formaldehyde	0.00	0.00
Acetaldehyde	0.12	0.61
Benzaldehyde	0.02	0.00
Benzene	0.06	0.02
n-Heptane	0.01	0.00
Ethyl acetate	11.00	1.5
Carbon tetrachloride	0.19	0.24
Glacial acetic acid	0.00	0.00
10% acetic acid	0.00	0.00
38% HCl	0.00	0.00
10% HCl	0.00	0.00
98% H_2SO_4	0.00	0.00
10% H_2SO_4	0.00	0.00
Red fuming nitric acid	0.00	...
70% HNO_3	0.00	0.00
10% HNO_3	0.00	0.00
50% NaOH	0.00	0.00
28% NH_4OH	0.00	0.00
10% NH_4OH	0.00	0.00
Bromine	0.00	0.00

*Values of 0.00 indicate no weighable loss in at least 90 days. Steady-state values of "p" cannot be calculated until this "induction period" is over

from spices and snuff to chemicals and powdered milk



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Treating film for ink adhesion

Q: *There appear to be two commercially used processes for treating polyethylene film to help printing-ink adhesion. One is by a flame treatment and the other is by an electrical discharge. Do these treatments work equally well for all types of polyethylene and all types of inks? Will these treatments help in the printing of other different kinds of plastic film?*

A: Nearly all the printed polyethylene film today has been treated by either the flame or the electrical-discharge process. Either process will, under proper control, convert the resin surface so that strong ink adhesion will result and the film can be heat sealed. There are many theories on the reason for this effect, but it is generally agreed that the film surface is changed chemically as a result of the process. It is also probable that there is some physical change in the film surface that also aids ink adhesion.

Both processes expose the film surface briefly to high temperatures in the presence of the oxygen of the air or to transiently formed oxidizing agents. Under these conditions, the polyethylene resin in the surface layer can be cracked (i.e., broken into smaller molecules), oxidized or chemically changed in a number of ways. The surface can also be eroded or changed by the melting and rapid cooling. All of these changes and reactions can occur in varying proportions, depending on the type of treatment and its length and intensity. The final result is a surface which is chemically and physically receptive to the solvents and binders of typical ink formulations.

If gravure-type inks with active solvents are to be used, the amount of treatment can be at a low level. If aniline-type inks are to be used, the level of treatment would be increased, since the alcohol-type thinners are less active as solvents. If the level of treatment is still further increased, the polyethylene surface becomes water wettable and the film can be strongly adhered with common glues and adhesives. However, any treating process must be carefully controlled in time and intensity to develop a level of treatment sufficient to give good ink adhesion but avoid overtreatment that can make the film non-heat-sealable.

Lower-density polyethylenes respond readily to these treating processes. Higher-density resins are less responsive and require higher levels of treatment. Polypropylene will probably respond to such treatments, but the amount and intensity, or the preferred type of treatment, can depend upon the particular resin. Slip agents, anti-oxidents and other additives can interfere with the treatment and may require substantial changes in processing conditions in comparison with the pure resin.

If these treating processes were done on other resins, some changes would occur in the film surface. However, most resins other than the polyolefins do not require such treatment, since ink formulations are available that give good ink adhesion. Some resins of unusual chemical inertness would benefit from these processes, but the necessary intensity and duration of treatment might create other problems.

There are a number of patents in the area of film treatment and some of them are available on a license basis, together with processing equipment and operating assistance.

Before these treating processes were developed and made available, the future of polyethylene film was in doubt for certain applications where the printed film would be exposed to abrasion or dampness. Development of these processes have eliminated all problems in obtaining excellent and durable printing and coating of polyethylene film and other forms of this increasingly important plastic resin.

Measuring gas transmission

Q: *There are many published methods of measuring the transmission of films to oxygen and other gases. We are trying to decide which of these methods is best. Some of our materials have possible use as gas barriers and we need to know the results of such tests. What is the best apparatus and method of measuring gas transmission?*

A: Each one of the many published or proposed methods of testing gas transmission will give some value for this property of films. If a given method is properly used and the apparatus calibrated, there would be no reason to doubt the accuracy or reproducibility of the test values. However, each of the many available methods was developed for a particular purpose or to obtain values under certain conditions.

Some test methods and apparatus will give good results for films or materials of relatively high gas-transmission rate and where humidity control is not important. Other methods and apparatus have been designed to extreme accuracy and with complete control of humidity and other test conditions. Another factor is pressure. For some uses the package may be vacuumized, in which case the test method should take this into account in testing the package material. Other packages may be gas filled, so that the gas transmission is not a function of gauge pressure, but is a diffusion phenomenon based on the partial pressures of the different gases.

The best method is one that simulates the conditions the material must meet in the type of package, the storage conditions and the protective requirements of the product. Tests also should be made on sealed areas of the package, of course, and on the finished package.

Certainly, one or more of the published and proved test methods will meet your specific requirements.

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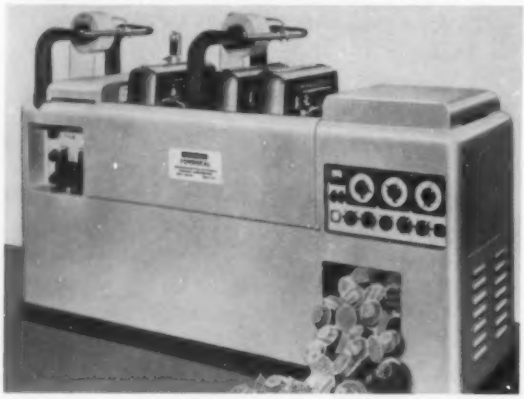
Equipment and materials

Unit forms, fills and seals plastic packs

A machine that forms containers from thermoplastic material, then fills the containers and heat seals them in one continuous operation has been developed jointly by Hydro-Chemie, Ltd., Zurich, Switzerland, and Société Plastimecanique, Paris. Conapac Corp. has been named exclusive U.S. distributor for the machine, which reportedly can operate at speeds of 1,000 or more containers per hour.

Thermoplastic sheet is fed automatically into the "Formseal" machine from two rolls. One sheet is thermoformed into containers, which are then filled. Then the second sheet is heat



sealed over the flanged edges of the filled container and the entire completed unit is simultaneously punched from the web and trimmed. Filled containers are discharged from the side of the machine. If the second or "closure" roll is preprinted, the supplier says, a photocell device accurately indexes the sheet over the container before sealing. The machine has a maximum forming area of 10⅛ by 7 in. and full forming depth of 2¾ in. Within this range it can produce packages of a variety of sizes and shapes using such materials as rigid and plasticized vinyls, styrene alloys and copolymers, cellulosics, polyamides and high- and low-density polyethylenes. The machine's second roll can accommodate coated paper or paperboard for making blister packs, in which case cellulose-acetate, cellulose-butyrate, rigid-vinyl or high-density-polyethylene blisters can be thermoformed to coated board, according to the supplier. *Conapac Corp., 120 E. 13 St., New York 3.*

Forming and heat sealing coated cartons

Peters Machinery says its new Model SG-P machine forms and heat seals polyethylene-coated paperboard blanks to produce linerless cartons and trays which are highly resistant to grease and moisture. Where added protection against grease and moisture is not required, the supplier says, the unit forms and glues cartons and trays using low-cost, non-coated blanks. Operating at a rated speed of 180 packages per minute, the new machine is suggested for packaging cookies, crackers, confections, frozen foods, cosmetics, cigarettes, vegetables and a variety of other manufactured or produce items. *Peters Machinery Co., 4700 N. Ravenswood Ave., Chicago 40.*

Sterilizable thin-wall plastic tubing

3M's "Kel-F" brand thin-walled halofluorocarbon plastic tubing, reported to remain free of distortion during steam or heat sterilization, is designed for pharmaceutical packaging of such products as parenteral solutions, disposable syringes and antibiotics. Since the new 5-mil tubing represents a reduction of 3 mils from the wall thickness previously necessary to withstand sterilization, important savings in package cost can be realized, the company claims. Cited properties of the material (developed as the result of a technique formulated by Sanford Plastics Co., Matawan, N. J.), in addition to its being sterilizable, include clarity, high tensile and impact strength, strong heat sealability, and impermeability to alcohol and formaldehyde. *Minnesota Mining & Mfg. Co., 900 Bush Ave., St. Paul 6.*

Fast single-operator cartoning

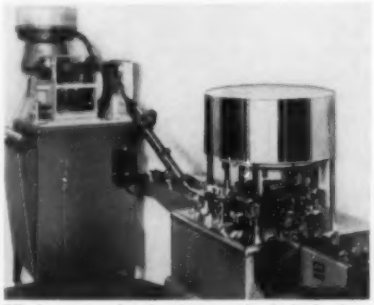
Redington's Automax cycle cartoner is designed for "whole-job" cartoning at speeds of 45 to 50 per minute with only one operator needed. As the operator places tubes, bottles or other solid or semi-solid articles in the three-place loading trough, the machine feeds, expands and positions cartons in conveyor pockets. Then the loaded trough is slid forward to insert the product into the individual cartons, after which the cartons are closed by automatically tucking in the end flaps. The completed packages are discharged onto a conveyor or packing table. The caster-mounted machine can handle reverse-tuck folding cartons ranging in size from 2 to 7 in. long, 1¼ to 4 in. wide and ¾ to 2½ in. deep. Size adjustments can be made quickly without the necessity for change parts, the company says. *F. B. Redington Co., Bellwood, Ill.*

Semi-automatic capper

Arenco's new semi-automatic capping machine for vials, aerosol cans and other containers is foot-treadle operated, permitting the machine operator to use both hands for loading. Designed for small or large capping operations, the unit has two adjustable valves which determine and maintain the exact compressed-air pressure required for perfect sealing, the supplier says. The machine handles containers ranging from 40 to 240 mm. high and 8 to 100 mm. wide. Safety devices are included. *Arenco Machine Co., 25 W. 43 St., New York 36.*

Valve inserter and capper for squeeze bottles

A new series of rotary inserting and capping machines for the automatic application of nozzle-applicator closures to polyethylene squeeze bottles is available from PMC Industries. Each unit in the RI-1200 series is a continuous-motion machine which removes the tubing from bulk stock, inserts it into the plug, cuts it to length and then inserts the entire assembly into the filled squeeze bottle. Among the built-in features which provide positive control of the dip tube and secure insertion of plugs, the company says, is a guide mechanism that assures accurate insertion of the valve assembly despite tube curvature. Variations of the basic machine are available for automatic placement of valve assemblies into aerosol containers. Details are available on request. *PMC Industries, Hackensack, N. J.*



38-valve milk filler

A new milk-filling and carton-sealing machine that reportedly offers double the output of previous such machines has been built by American Can. Called the Canco 300-38 filler, it has 38 filling valves. It can fill and seal 240 quart-size fibre containers per minute and a greater number (up to 260) smaller-size cartons, the company claims. Higher speeds are achieved economically, according to the supplier, through new concepts in filler design which permit the use of plastic and rubber materials as

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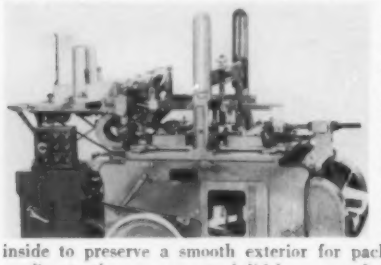
Equipment and materials

well as stainless steel. The redesigned valve makes use of a bottom-actuated, cylindrical measuring sleeve with a threaded displacement plunger. Milk enters the sleeve from the filler bowl through bellows around the sleeve. The upstroke of the operating cycle seals off the intake areas and the overstroke purges the surplus to assure exact measure, the company says. A shut-off system right at the nozzle is designed to eliminate dripping or clingage. *American Can Co., 100 Park Ave., New York 17.*

Low-cost coated boxes at 3,600 per hour

Its specially modified Kingsbury & Davis thermoplastic quad stayer can produce rigid set-up boxes and trays, made of polyethylene-coated sulfate board, at speeds up to 3,000 per hour, says FMC. The "Poly Pak" tuck-lid boxes and trays can be produced in a wide variety of sizes and shapes, and require neither adhesive nor stay tape. Box tabs are heat sealed on the inside to preserve a smooth exterior for package design. According to the company, tuck-lid boxes can be produced at low cost in sizes ranging from 2¼ by 3⅛ by ½ in. to 10½ by 7⅞ by 3 in. Tray sizes range from 3 by 2¼ by ½ in. to 15 by 10½ by 3 in. Size change-overs reportedly can be made quickly and easily. The packages are suitable for frozen foods, bakery products, candy and other products, the supplier says. *Food Machinery & Chemical Corp., FMC Packaging Machinery Div., 4992 Summerdale Ave., Philadelphia 24.*

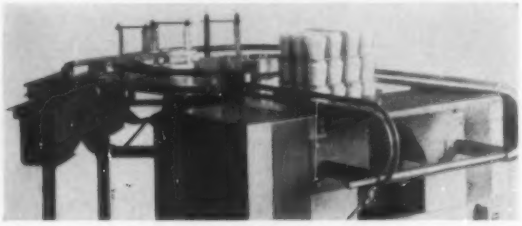


High-gloss coated packaging paper

Designed to give extra eye appeal to self-selection packages is Chase Bag's new high-gloss paper bag, fabricated from a coated paper called "ChaseGloss" by the company. According to the supplier, its new shelf bag costs no more than its previous paper packages, despite the improved properties. At present, the bags are being used primarily for the packaging of flour. *Chase Bag Co., 309 W. Jackson Blvd., Chicago 6.*

Adjustable multi-tier unloader

An adjustable unloader that will handle glass and metal containers packed in two, three or four tiers is available from Island Equipment. Called the Styl-O-Matic multi-tier unloader,



the new machine is quickly adjustable to the size of container to be handled and permits manual unloading at fast speeds, the supplier claims. Because the dumping table is always level, the possibility of the stacked containers tipping over and jamming the mechanism is minimized. During unloading operations, the unloading table moves automatically to the proper level to feed each successive tier of containers onto the unscrambler. Since the operation is automatic, the company points out, the machine operator's hands do not come into contact with the containers, thus assuring sanitary conditions. *Island Equipment Corp., 1090 E. 31 St., Hialeah, Fla.*

Inkless imprinting on flexible packages

Gottscho's "Wrap-A-Printa" attachment for wrapping, bundling, pouch- and bag-making machines is designed for inkless imprinting on waxed paper and other hard-to-print packaging materials. Instead of ink, the attachment uses roll leaf, which assures sharp, rubproof imprints on waxed paper, polyethylene film, cellophane, coated foil and other materials in high-speed production operations, the company claims. Other cited benefits of the new attachment are low cost, simplified construction and simple adjustment. *Adolph Gottscho, Inc., Hillside, N. J.*

Polyethylene bags for beer containers

Continental Can's Shellmar-Betner Div. has introduced side-seal polyethylene bags designed for use as carry-home packages for multiple units of canned or bottled beer and other packaged beverages. Made of high-impact polyethylene, the bags come equipped with the company's patented Zip Cord closure and are available printed with the brewery's trademark. In addition to the merchandising advantages of the transparent bags, the supplier says, they have re-use value as containers for picnics or for storing leftover foods. *Continental Can Co., Shellmar-Betner Div., Mt. Vernon, O.*

Polyethylene-and-steel container

A polyethylene-and-steel container for shipping corrosive chemicals has been introduced jointly by the Plax Corp. and Jones & Laughlin's Container Div. Called "Jalboy," the container consists of a polyethylene inner component and a steel-drum outer jacket. The neck and cap of the unbreakable polyethylene container protrude through a 4½-in.-diameter curled and gasketed opening in the cover of the steel drum. The cover is available coated with 8- to 12-mil PVC as protection against spillage corrosion. The steel container itself is coated with a phenolic-based material to resist corrosion. Cited advantages of the new unit (available in 13-gal. size with 8¾-lb. inner container and 14-gal. size with 5¾-lb. inner container) are light weight (23 lbs.), superior protection and low cost. The unit is available with sales message, trademark or label copy lithographed in four colors. *Plax Corp., Box 1019, Hartford, Conn. Jones & Laughlin Steel Corp., Container Div., 405 Lexington Ave., New York 17.*

Line of fast-setting resin adhesives

Immediate tack, fast setting, heat and moisture resistance, and low cost are the advantages cited by Morningstar-Paisley for its new line of resin adhesives designed for all types of glue-lap equipment (at all speeds) in corrugated-box manufacturing. Available in light tan or white, the ready-to-use adhesives hold at a temperature of 230 deg. F. and meet all water-resistance requirements as proved in laboratory tests, the supplier claims. *Morningstar-Paisley, Inc., 630 W. 51 St., New York 19.*

Low-cost skin-pack board processing

Low-cost in-plant processing of paperboard stock for use in skin or blister packaging is one of the advantages claimed by Abbott Plastic for its new CDS coating, drying and scoring unit. Printed paperboard sheets are hand fed into the coating machine, where liquid adhesive is automatically applied in an even coat over the entire board surface. The coated sheets then move along a conveyor belt and pass beneath two infra-red

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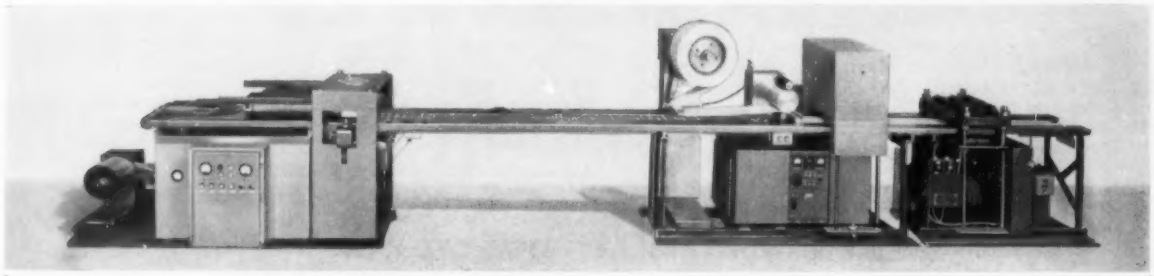

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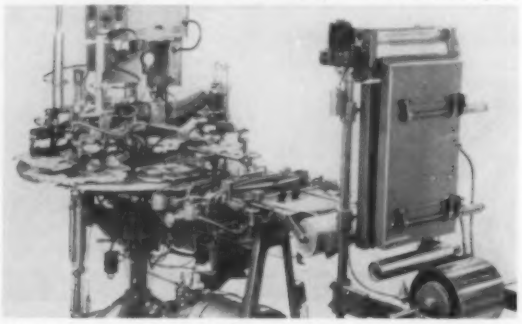
Equipment and materials

heaters, which dry the sheets completely. For scoring prior to skin-pack operations, the sheets are hand fed into the scoring-unit cylinder, where 400 circular blades score the surface of the dried adhesive to allow the passage of air through the board. The three-machine unit handles sheets up to 32 in. and turns out 900 completed sheets per hour, the company says. The machines, which reportedly cut board-processing costs 50%, are available separately or as a unit. *Abbott Plastic Machine Corp., 7124 N. Clark St., Chicago 45.*

Improved transparent box and cover maker

Designed to seal both acetate and polystyrene sheet is the new, improved model of Staude's Vue-Matic transparent-plastic box- and cover-making machine. The unit operates at a rated speed



of 900 boxes or covers per hour. Dielectric welding heads are used for electronic sealing of acetate and similar plastics; direct-heat heads are used for sealing polystyrene sheet. As the material (5 to 10 mils thick) comes off the stock roll (right), it passes through a radiant-heat unit which preconditions the sheet to a greater degree of flatness, then passes over a cold roller that sets the material flat and removes all residual curl. This heat-and-cold treatment, the supplier points out, assures uniform flatness that permits box or cover blanks to be cut and formed with consistent accuracy. The sheet then moves on to the forming and printing station (left). Occupying floor space of 4 by 12 ft., the machine produces transparent boxes ranging in dimension from 4 by ¾ by ½ in. to 10 by 6 by 2 in. *E. G. Staude Mfg. Co., 2675 University Ave., St. Paul 14.*

White linear polyethylene jars

Milk-white linear polyethylene jars, designed for use by packagers of drugs and cosmetics, have been introduced by Lermer Plastics. The rigid plastic containers, with twist-off caps, are available in five stock sizes, ranging from ½ to 4 oz. Reported advantages of the high-luster "Poly-Opal" jars are their light weight, which translates into low freight rates, and resistance to breakage. The containers are made of Celanese Corp.'s "Fortiflex" polyethylene. *Lermer Plastics, Inc., Garwood, N. J.*

Press for film and board stock

The new Cerutti "America Special" press is designed to print both film and board stocks. The press is furnished with two unwind and two rewind sections to accommodate the different weights of stock used. A butt splicer, two-position roll stand and surface rewind with automatic flying splicer are provided for handling rolls of board up to 60-in. diameter. For cellophane or other film, a turnover unwind with flying splicer and two center rewinds are used. *Parsons & Whittemore Graphic Corp., 250 Park Ave., New York 17.*

Automatic sealer for polyethylene bags

An automatic, table-top polyethylene-bag sealer with 12-in. sealing jaws has been developed by Mercury Heat Sealing. The new unit, measuring 14 by 10 by 9 in. in closed position, offers exact pressure and dwell time to produce strong, waterproof seals, the company says. An adjustable bag rest accommodates bags of varying lengths and simplifies the handling of filled bags. A smaller model also is available. *Mercury Heat Sealing Equipment Co., 2601-21 N. Howard St., Philadelphia 33.*

Trigger unit permits faster bagging

A new trigger arrangement, featuring completely automatic cut-off, permits faster bagging by its G-17 gross bagger, according to Richardson Scale. The company reports that the trigger unit holds the bag open longer and can be set for exact weight of most free-flowing materials, thereby eliminating the need for trimming operations to bring the bag up to proper weight. The gross bagger is designed to fill bags with capacities of 10 to 140 lbs. Slide mounting permits fast serving of multiple spouts. *Richardson Scale Co., Clifton, N. J.*

Automatic control for printing operations

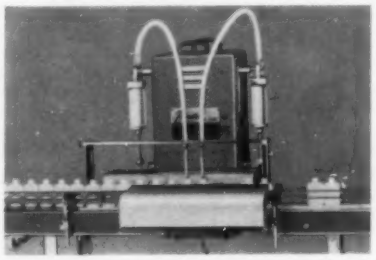
An electronic system for automatic control of color, cut-off and fabricating register on high-speed presses and for printing on both sides of the web is available from Champlain. Called the Proportional Registron (Model C300), the system consists of four integrated components: master control, web scanner, phase micrometer and automatic correction computer. It can be set so that any misregister, down to 0.0005 in., produces proportional correction, the company says. The system guarantees exact web registration from unit to unit on all printing, cutting and blanking in-line systems, eliminates errors and minimizes waste through misregister of web materials, the company claims. *Champlain Co., Bloomfield, N. J.*

Economical size for frozen-food board

Minnesota Mining & Mfg. is making available its "Scotchgard" brand grease- and oil-repellent size for waxed frozen-food board. The fluorochemical material, according to 3M, makes possible the use of less costly paperboard furnish in frozen-food packaging with no reduction in the carton's functional quality, since the size prevents the discoloration caused by the penetration of wax into the sheet. The material also effects savings in pigment costs (since little or no pigment filler is needed to retain the board's white appearance) and in wax costs (since less wax is needed due to the size's resistance to wax penetration), according to the manufacturer. *Minnesota Mining & Mfg. Co., 900 Bush Ave., St. Paul 6.*

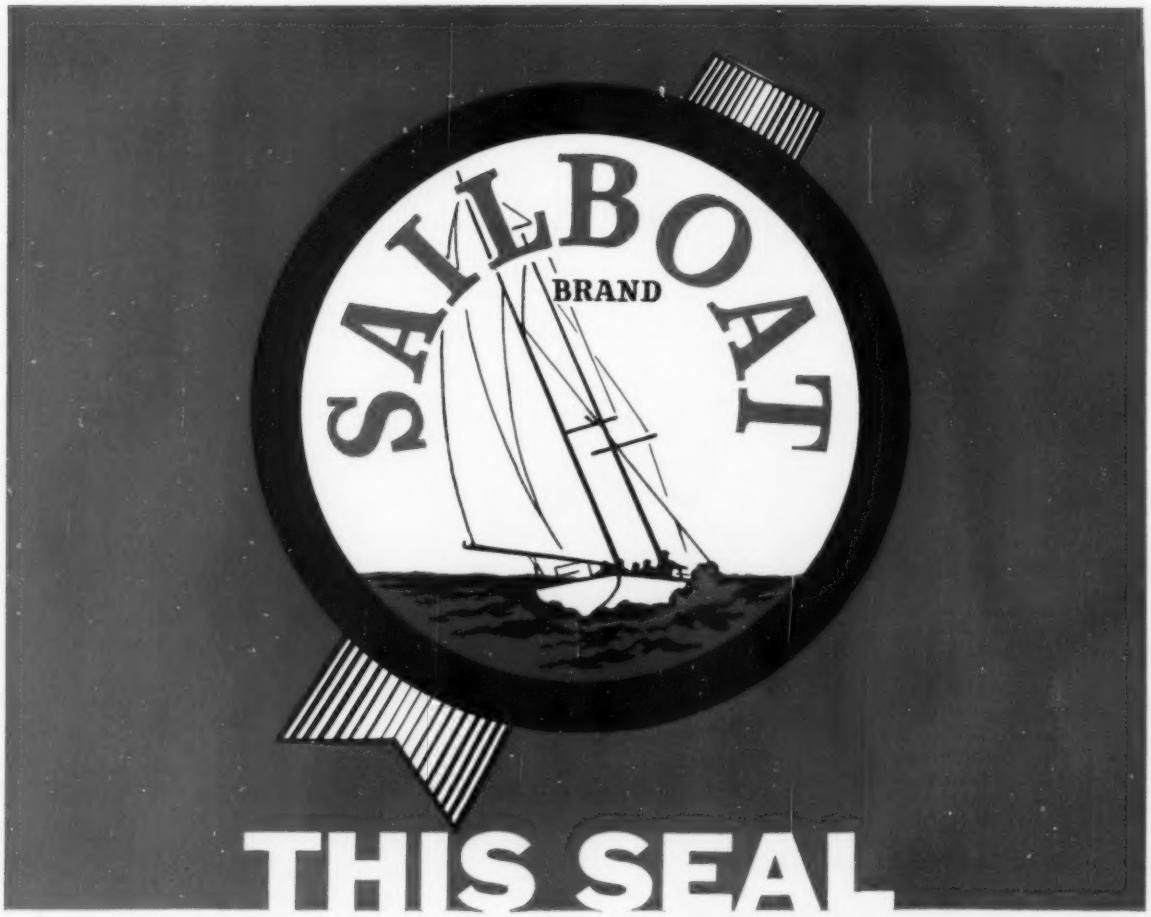
Automatic conveyor-type liquid filler

National Instrument's new Filamatic conveyor filler is designed for filling liquids into plastic vials, glass or metal containers in standard or irregular shapes. The new unit incorporates a positioning mechanism that seats empty containers precisely under the dual filling spouts. This operation, plus a no-container, no-fill control, eliminates spilled liquids and insures that clean, dry containers are fed to the labeling machine, the company says. The machine handles containers ranging in capacity from one dram to 16 oz. and is available in two models with rated speeds of 60 or 120 filled containers per minute. *National Instrument Co., 2701 Rockwood Ave., Baltimore 15.*



New dial caliper gauges

"Quicktest" dial caliper gauges for precision measuring thickness of foil, paperboard and other materials are available from Bemax Import-Export. The gauges consist of the measuring mechanism with dial-type face and two protruding shanks. The lower shank is immobile, while the upper shank is pivoted inside the gauge case. Deflection of the latter shank is transmitted to the needle on the face of the measuring mechanism,



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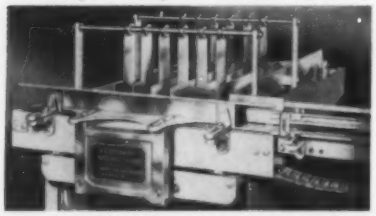
Equipment and materials

enabling the measurement to be read at a glance. Rapid, accurate measurements can be made by holding the gauge in one hand and the item in the other, the company says. *Bemax Import-Export Co. Technical Dept., Southampton, Pa.*

Container feeder handles varied shapes

U. S. Bottlers Machinery's new automatic container feeder is designed to handle glass or metal containers in round, square, oval or panel shapes. The unit reportedly can be adjusted quickly to accommodate containers ranging from ¾ to 4½ in. in diameter. As each row of containers advances intermittently on a moving mesh belt, a retractable discharge guide releases the row to the conveyor as soon as the preceding row has cleared. Variable speed ratio of 2½-1 is regulated by the turn of a crank. To accommodate the number of containers per row as packed, six adjustable separator plates (on top of the machine) are supplied with the standard machine. Additional plates are available for more rows. To help insure machine cleanliness, carton lint drops through the mesh belt and is accumulated in a dust-collecting pan. The unit, which is built on a rigid steel frame and has steel-enclosed sides, has a minimum of wearing parts and requires little servicing, the company claims. *U. S. Bottlers Machinery Co., 4015 N. Rockwell St., Chicago 18.*

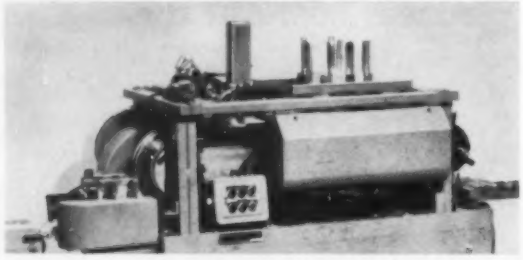


Greaseproof paper grades available

Hamersley Mfg. reports that it has installed a size press on a modernized paper machine, enabling it to produce new grades of release treated greaseproof parchment and glassine papers for use as box liners, fluted cups and trays in connection with the packaging of candy, baked goods, meats and other food products. *The Hamersley Mfg. Co., Garfield, N. J.*

Fully automatic packaging system

Mead-Atlanta's Cluster-Wrap, described as a fully automatic system for multi-unit packaging of cartons for food products such as ice-cream sandwiches, frozen-food cartons, candy bars, cigarettes and other items, reportedly has a production speed of up to 150 packages per minute. Available on lease basis, the



self-contained machine and carton process, which occupies 6 ft. of floor space, eliminates hand packing, the company says. The system operates in continuous motion: as the product is conveyor fed into the left side of the machine, die-cut printed cartons are fed simultaneously from the top of the machine and folded over the product. No glue is used; self-locking tabs on the cartons secure the contents on the bottom side. In addition to its use as a multiple-packaging machine, the equipment is also adaptable for use as a cartoner or carton former for frozen foods and like items, according to the manufacturer. *Mead-Atlanta Paper Co., 950 W. Marietta Rd., Atlanta.*

Coating for linear polyethylene

A coating for linear polyethylene and polypropylene has been developed by Rowe. Called Nylene 1901, its properties—in addition to adhesion to the plastics mentioned—include flexibility and resistance to moisture, solvents and chemicals, the supplier says. It can be applied by spray, dip or coating machine and is available in high-gloss clear or pigmented opaque colors. *C. L. Rowe Corp., 61 Van Dam St., Brooklyn 22.*

Blanking, punching and scoring unit

Available from Quality Weld is a multi-purpose blanking, punching and scoring machine that makes folding boxes, pallets, cake trays and other items directly from roll stock. The company's Model P-100 can handle rolls or coils of paper, foil, plastic films and other materials in widths up to 48 inches. The machine, which reportedly operates accurately at high speeds, can be fitted with a printing attachment for one-color or multicolor printing on one or both sides of stock. Also available are embossing, splitting, gluing and stitching attachments. Down time for changing rolls is negligible, the supplier says. *Quality Weld & Mfg. Co., St. Francis, Mich.*

Family of stacking cans

Continental has completed its family of F-style cans with the addition of a half-pint container suitable for insecticides or other liquid products. The container's bottom is indented so that the centrally located ¾-in.-diameter nozzle at the top of one can fits snugly into the bottom of another. This secure-stacking feature, the company points out, makes it possible for retailers to set up multiple display of product within a smaller area. In addition to its new half-pint can, the supplier offers the containers in pint and quart sizes. *Continental Can Co., 100 E. 42 St., New York 17.*

New printable cloth tape

Designed to be used as labels or signs on card stock as well as printed labels in roll form, Permacel-LePage's Permacel 685 tape reportedly can be printed legibly with even the smallest type faces. The tape's plastic-coated cotton backing provides the necessary smoothness for highly legible printing, the company says. Cited advantages of the tape, which is available in white or yellow, include: high resistance to heat and moisture, excellent adhesion and a tensile strength of 65 lbs. per inch. *Permacel-LePage's, Inc., New Brunswick, N. J.*

Promotional end labels for bread wraps

Pollock Paper is offering a new stock label series for bread wraps, designed for promotional tie-in with the baking industry's campaign for increased outdoor eating in the warm-weather months. The series of eight red, green and black end labels illustrates old-fashioned automobiles against a picnic setting. Copy on the labels promotes the "fun" theme of outdoor eating and features the American Bakers Assn.'s slogan: "Let's eat outdoors." *Pollock Paper Corp., Sub. St. Regis Paper Co., 2236 Cockrell St., Dallas 22.*

Laboratory paper-coating machine

A new paper-coating machine, designed to help solve coating problems, has been installed in the development laboratory of Koppers' Plastics Div. Developed in cooperation with the Dilts Div. of Black-Clawson Co., the unit reportedly can duplicate almost any paper-coating condition, including those performed on a transfer-roll coater, offset-gravure coater, KCM coater, size-press coater, air-knife coater and trailing-blade coater. The

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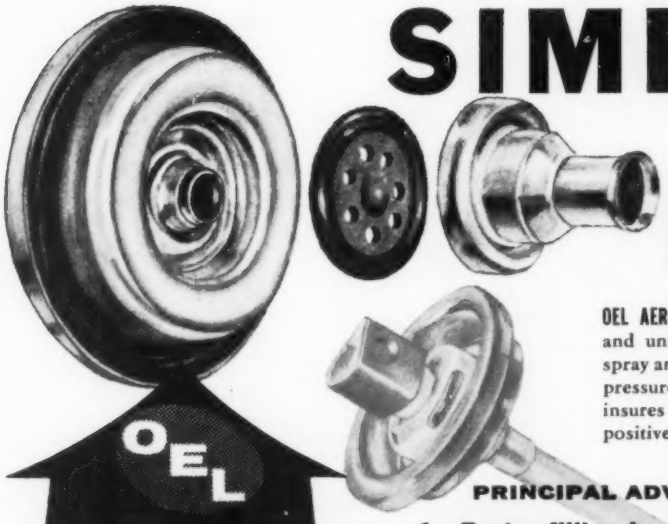

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Equipment and materials

unit, which is to be used for investigating coatings and coating conditions for the paper, packaging and allied industries, can handle a 20-in. web of paper at a rated speed of 1,100 ft. per minute. It has 14-in. metering rolls and 20-in. applicator rolls. *Koppers Co., Inc., Plastics Div., Kobuta, Pa.*

High-speed powder compressor

An automatic powder tabletting and compressing machine has been introduced by Arenco. Said to be suitable for compacting all types of powders, the unit dispenses accurately into containers ranging in diameter from 1 to 4 in., at speeds of up to 1,200 containers per hour, the company says. A vacuum dust extractor is available for cleaning away surplus powder. *Arenco Machine Co., 25 W. 43 St., New York 36.*

Portable shipping-carton stapler

An air-operated, portable stapling machine for sealing filled corrugated containers is offered by Bostitch. Designated D14AD in the company's line, the stapler has eight closure adjustments, ranging from full clinch to shallow blind clinch. It weighs about 4 lbs. and its clinchers are interchangeable left and right. *Bostitch, Inc., East Greenwich, R.I.*

Air-doctor coaters for on-machine board coating

A new line of air-doctor coaters designed for on-machine board coating is being offered by Black-Clawson's Dilts Div. Available for web widths up to 210 in., the coaters permit simplified blade adjustment and ease of positioning with respect to the web, it is claimed. *Black-Clawson Co., Dilts Div., Fulton, N. Y.*

Low-cost automatic baling of bags

A 50 to 80% reduction in baling and labor costs is claimed by General Bag Equipment for its Bowes automatic baling machine. The unit is designed to bale consumer bags ranging in

size from 1 to 25 lbs., in such patterns as 5 ten-lb. bags, 10 five-lb. bags and 12, 24 or 25 two-lb. bags. Shown here baling Robin Hood brand bagged flour, the unit's plunger has just inserted a pattern of 10 five-lb. bags into the baler bag. The plunger then retracts to its original position while the filled baler bag moves by belt conveyor to an automatic bale-sealing station. According to the company, only one operator is needed to supervise the complete baling and sealing operation. *General Bag Equipment Corp., 3362-68 W. 137 St., Cleveland 11.*

Two-color printing on plastic-container closures

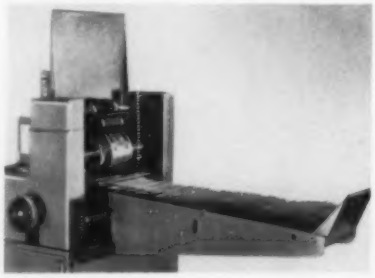
Mutual Plastic Mold is now offering two-color printing on the closures of its quart- and 14-oz. size Crystal Pack fluted polystyrene containers. The new service has been made available through expansion of the company's plant facilities. *Mutual Plastic Mold Corp., South Gate, Calif.*

Serrated metal edger for cartons

A new machine that simultaneously die stamps and affixes serrated metal edges to paperboard cartons at a reported speed of 6,000 per hour has been introduced by Decherts. Called the Z&H serrated metal edger, the unit accommodates cartons up to 48 in. wide. Operation is completely automatic, the company says. *Decherts Machine Shop, Inc., Palmyra, Pa.*

Fast folding-carton overprinter

Printing speeds of up to 200 units per minute are claimed by Popper & Sons for its new Rejafix Model K-2 carton overprinter. The unit's printing cylinder, which can be pre-set in any desired position, contains—in addition to a metal or rubber stereo for printing basic carton data—a single-line holder for loose metal type, to enable the operator to make quick change of coding, dating and other details. The machine can handle collapsed cartons ranging from 1¼ to 3½ in. wide and 1¼ to 8¼ in. long. Change-over from one carton size to another takes less than a minute, the company says. Cartons to be printed are stacked in an adjustable magazine at the top of the machine which holds 250 cartons. Reloading can be done while the unit is in operation. After passing under the printing cylinder, the cartons are taken away by a continuous conveyor belt which automatically stacks them against a retaining wall (right) for removal by the operator. *Popper & Sons, Inc., 300 Fourth Ave., New York 10.*



Expanded shipping-bag line

Jiffy Mfg. has expanded its line of shipping bags to include three new products: a reinforced padded shipping bag with a mesh-reinforced outer liner, a heavy-duty shipping bag with an outer liner of 90-lb. kraft paper and an unpadded utility shipping bag. The company reports also that all of its padded shipping bags now are made with Clupak extensible kraft paper at no increase in price. *Jiffy Mfg. Co., Hillside, N. J.*

Cutter for corrugated rolls

Bulman has introduced a cutting mechanism designed for fast, efficient cutting of corrugated rolls. Called the Razor-X Cutter, it is suggested by the manufacturer for use in packaging plants. *E. O. Bulman Mfg. Co., Grand Rapids, Mich.*

Quick-change imprinting cylinder

A quick-change plate cylinder on its new automatic Micro-Printer attachment permits faster switching of package imprints and code numbers during production change-overs, claims Cozzone Marking. Cylinder change is effected by loosening a single nut, removing the sleeve and replacing it with another imprinting sleeve. The company reports that its printing attachment is available in 18 models, with cylinder circumference ranging from 9 to 36 in. The unit reportedly can be placed on any existing packaging machine to code and mark such materials as metal and plastic container tops, kraft papers, boxboard, cellophane, polyethylene and coated papers. It also can be used to imprint continuous strips, webs or sheet forms. *Cozzone Marking Co., 18 Nuttman St., Newark, 1, N.J.*

Stock-design candy bags

Trick or Treat candy bags in two different Halloween designs have been introduced by Oneida Paper Products. These flat-style bags are made with 30-lb. white opaque M. G. paper. Printed in two colors, orange and black, they are packed 1,000 to a box, approximately 10,000 to a case. The 3¾-by-6-in. bags are suggested for candy and similar products that can be merchandised effectively in Halloween or other seasonal promotions. *Oneida Paper Products Inc., Clifton, N. J.*

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Plants and people

Donald D. Pascal has been appointed pres. and chief admin. officer of **National Starch Products, Inc.**, New York. He succeeds **Frank Greenwall**, who has

Pascal Greenwall Dillon

been elected chairman of the board. **James Dillon**, as new senior v.p., will explore and develop new fields for company activity and growth, as well as act as chairman of National Starch's research committee.

Standard Packaging Corp., New York, has acquired **Johnston Foil Mfg. Co.**, St. Louis, and **Eastern Corp.**, Bangor, Me., maker of bleached sulphite pulp and other paper products. Both companies will be operated as divisions of Standard, with **Howard J. Geraghty** as mgr. of Johnston and **Harold Holden** as vice chairman of the board in charge of Eastern. **John J. Geraghty, Sr.**, Johnston chairman, is retiring.

Curtis

Lewis A. Curtis, formerly v.p. in charge of sales, has been elected pres. of **Package Machinery Co.**, East Longmeadow, Mass. **Roger L. Putnam** is now executive v.p. and **J. Edwin Hanson** is the newly elected treas. Mr. Curtis succeeds **Donald H. Dalbeck**, who has resigned after serving as pres. and treas. of the company for the past two years.

Lloyd E. Stephen has been promoted to exec. v.p. of **Mead Papers, Inc.**, Dayton, O., sub **The Mead Corp.** Mr. Stephen joined Mead in 1929 and moved to Mead Papers in 1934. He was elected v.p. of the latter in 1952, a position he has held until his present appointment.

Fisher

Continental Can Co., New York, has named **Raymond G. Fisher** to the new post of v.p. in charge of mktg. He joined the company in 1952 as director of economic research and, since 1956, has served as director of sales research and promotion activities.

Cochran Foil Corp. is the new name given to the former **Cochran Foil Co.**, Louisville, recently purchased by **Anaconda Co.**, New York. Officers of Cochran, which will operate as a wholly owned subsidiary, are: **Archibald P. Cochran**, pres.; **Thomas D. Gebhart**, exec. v.p.; **Mord Lewis**, v.p.; **Herbert G. Hanks**, v.p., and **Edward C. Tatgenhorst**, secy. and treas.

E. F. Dodge Paper Box Co., Leominster, Mass., has acquired a controlling interest in **The Libbie Printing Co.**, Allston, Mass. Dodge, which last year observed its 100th anniversary, reports that Libbie will be operated as a division in its present location. Libbie management will continue to operate the company, according to Dodge.

Finley B. Hess has been elected pres. of **Brockway Glass Co.**, Brockway, Pa.

Hess

Mengle

He succeeds **G. A. Mengle**, who becomes chairman of the board and chief exec. officer. Mr. Mengle had been pres. since 1949. Mr. Hess has been with Brockway since 1933 and became exec. v.p. in 1954, a post which he held until his present appointment by the company.

Federal Paper Board Co., Bogota, N. J., has purchased the **Federal Glass Co.** of Columbus, O., manufacturer of glassware and corrugated containers. Upon approval by stockholders of both companies, Federal Glass will become a division of Federal Paper Board, with present management remaining in charge, according to the latter.

Hullinger

Walter J. Hullinger has been appointed v.p. and gen. sales mgr. at **Milprint, Inc.**, Milwaukee. He joined the company in 1948 and became div. sales mgr. in 1953. He was later named asst. gen. sales mgr. In his new position, Mr. Hullinger's duties will include direction of the overall activities of Milprint's entire field sales organization.

R. C. Can Co., St. Louis, will operate as a division the recently acquired **National Paper Can & Tube Co.** National's offices are in Milwaukee.

Harry E. Miles has been elected a v.p. of **Container Corp. of America**, Chicago. He was formerly v.p. and a director of **The Mengel Co.**, Louisville, Ky., a sub. of Container Corp. He also served as general manager of the firm's corrugated-box division.

John W. French has been named mgr. of product development for the film and sheet div. of **Plax Corp.**, Hartford, Conn. **Richard S. Griffith** has been appointed to the new post of asst. product mgr. for industrial containers.

Campins

Philip Morris, Inc., New York, has acquired **Polymer Industries, Inc.**, Springdale, Conn. Polymer, a producer of industrial adhesives and textile chemicals and intermediates, was organized in 1946 by **Dr. Frank C. Campins**, pres. of the company, in association with **Dr. Howard L. Kane, Dr. Moses Konigsberg, John W. Ogletree** and **Raymond T. Clarke**, all of whom are now v.p.s of Polymer Industries.

William E. Browning is the new sales mgr. for **Panta-Pak, Div. The Pantasote Co.**, New York. Under license from **Compagnia Italiana Nest-Pak S.P.A.**, Bologna, Italy, Pantasote is now making and distributing "Panta-Pak" multicell polyvinyl chloride plastic trays for protective packing of soft fruits and other products. (See MODERN PACKAGING, April, p. 160.)

Kaness

H. L. Kaness has been named senior div. sales mgr. for **Knox Glass, Inc.**, Knox, Pa. **Robert D. Brady** has been appointed asst. product sales mgr., succeeding **Gail T. Smith**, who moves to the company's New Haven, Conn., office. In his new position, Mr. Kaness will serve as coordinating asst. on special assignments to the v.p. in charge of sales.

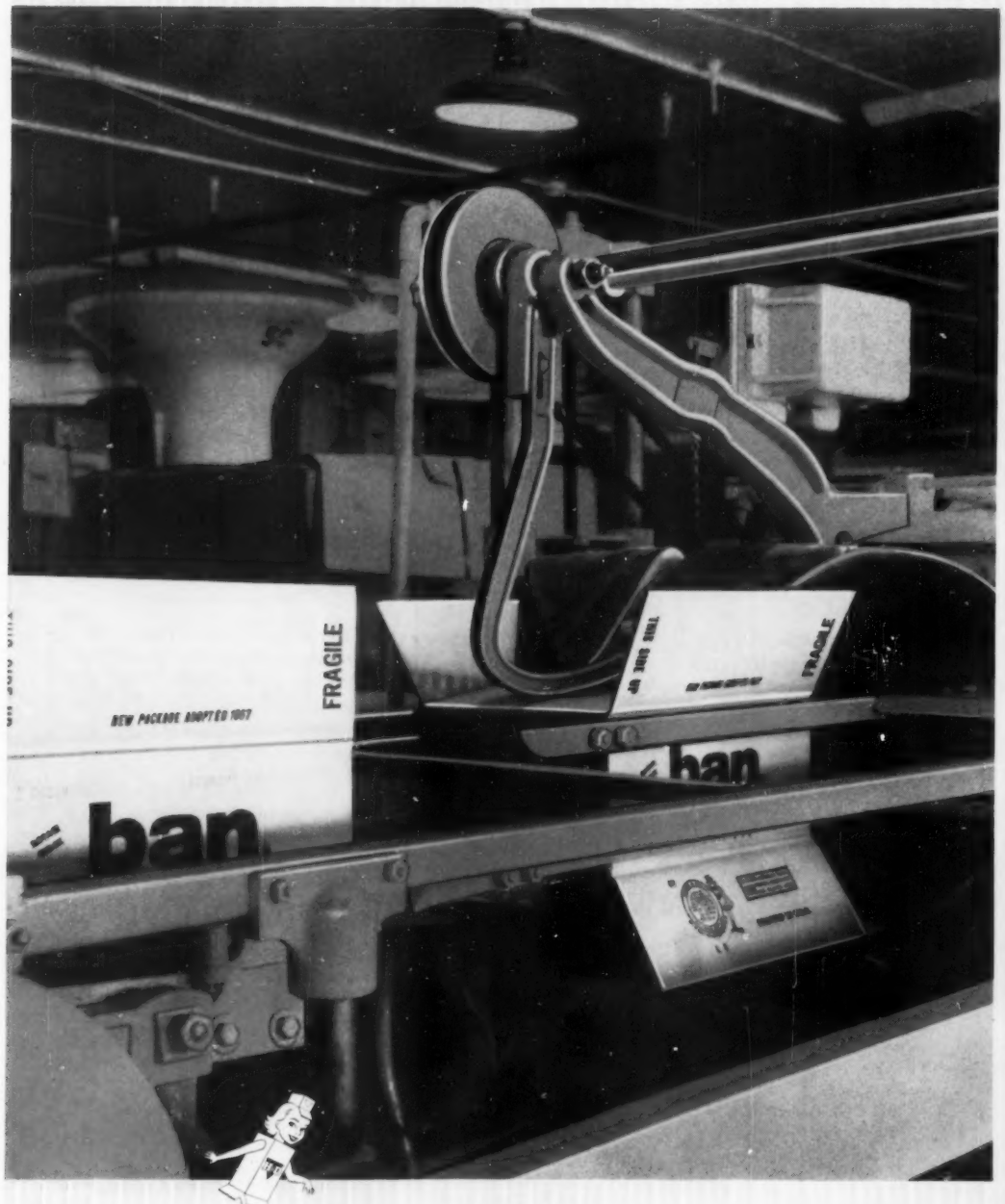
General Converting & Laminating Corp., Oakland, Calif., has acquired **Western Package Products Co.**, Pasadena. **Charles E. Jones** will remain as chairman of Western Package, a film converter. **Thomas E. Bruffy** will be v.p. of both Western Package and the parent company.

Husted

Union Carbide Chemicals Co., Div. Union Carbide Corp., New York, has appointed **Elbert E. Husted** as sales mgr. for fluorocarbon propellents. Mr. Husted will supervise marketing of the company's fluorocarbons to be produced at Institute, W. Va., for use by the aerosol industry.

Pollock Paper Corp., Dallas, is now in full-scale operation at its new San José, Calif., location. The plant's eight-color printing equipment is producing bread wrappers and other packaging materials designed for use by the baking industry in the Western states.

Bostitch, Inc., East Greenwich, R. I., has appointed **John R. Gowell** as gen. mgr. of its stapling and stitching divi-



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Plants and people

sion. **J. Grandel Jones** becomes gen. mgr. of the company's container-machinery division. Mr. Gowell and Mr. Jones will coordinate research, production and marketing within their divisions.

Dr. Robert E. Wilson, retired chairman of **Standard Oil Co. (Indiana),** has been retained by **Continental Can Co.,** New York, to make a comprehensive study of its research and development program. Dr. Wilson was in charge of research for many years at Standard Oil before his retirement.

Armstrong Cork Co., Lancaster, Pa., has appointed **Robert M. Ulmer** as asst. gen. sales mgr. of its Glass & Closure

Ulmer Petry Langsett

Div. He is succeeded as mgr. of glass container sales administration by **Byron T. Petry,** former sales mgr. of the company's Cleveland office. At the same time, **Robert C. Langsett** has been promoted to mgr. of market development in the Glass Container Div.

Seymour Wassyng has been appointed director of packaging for **Joseph E. Seagram & Sons,** distiller, New York. A member of the **Society of Industrial Designers,** Mr. Wassyng formerly was director of packaging for **Revlon, Inc.,** and also was associated with several design companies.

Lyons

American Can Co., New York, has established a Southern sales area with headquarters in New Orleans and has appointed **William V. Lyons** as mgr. **R. C. Coleman** will be asst. mgr. The new sales area was formerly included in Canco's Eastern and Central regions and will provide a more complete service for the South's packing industry under the new set-up, according to the company.

Powr-Pak, Inc., has moved into a new 110,000-sq.-ft. plant at 145 Howard Ave., Bridgeport, Conn. The new facility, which includes four separate production lines, is geared to turn out 350,000 aerosol units daily. In addition to filling equipment for pharmaceuticals and foods, the building also houses an extensive research laboratory.

Olin Mathieson Chemical Corp., New York, will build a corrugated-shipping-

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container plant at Joliet, Ill. The facility will cover 155,000 sq. ft. and will have a production capacity of 30,000,000 sq. ft. of board per month. Production is scheduled to begin early next year.

Mathews

E. Gilbert Mathews has been named v.p. in charge of carton production for **Federal Paper Board Co.**, Bogota, N. J. He will be responsible for Federal's eight carton plants. Prior to last October, when he took charge of carton production, Mr. Mathews was mgr. of the company's New Haven, Conn., carton plant.

Montecatini, the Milan, Italy, chemical concern, plans to triple the capacity of its polypropylene plant at Ferrara. This will increase annual production of "Moplen" polypropylene to 45,000,000 lbs. **Chemore Corp.**, 21 West St., New York, is Montecatini's U. S. representative.

Sun Tube Corp., sub. American Can Co., New York, has appointed three of its executives to newly created posts. **Nicholas Marchak** becomes v.p. of commercial development and research; **Claude L. Alexander** is v.p. in charge of sales, advtg. and sales promotion, and **Kenneth G. Michel** becomes v.p. in charge of mfg. at the Hillside and Washington, N. J., plants. Sun Tube makes collapsible metal tubes, aerosol valves and impact extrusions for packagers.

R. W. Ott, Jr., has been named v.p.-sales, for **Fife Mfg. Co.**, Oklahoma City, Okla. The company supplies automatic web guide equipment to manufacturers and converters of paper, film, foil and other materials handled in roll form.

Louis Dennis has been named Southern and Southwestern regional mgr. of bakery packaging sales by **Marathon Corp., Div. American Can Co.**, Menasha, Wis. He will make his headquarters in Dallas, Tex.

Hultkrans

Milprint, Inc., Milwaukee, has formed a market-research department. **Paul Hultkrans**, recently appointed v.p. of market research, will head the new department and will supervise the company's food-packaging sales divisions as well as its foil, bag and lithograph sales. He was formerly v.p. in charge of research and product development for Milprint.

Robert Carr has been named chairman of the board of **John Dale, Ltd.**, London, England. Mr. Carr is a Member of Parliament. **J. W. G. Collins** becomes asst. managing director. The company manufactures metal and plastic cans, closures and collapsible containers.

James A. Dyer has been named to the newly created position of packaging coordinator for **Ansul Chemical Co.**, Marinette, Wis. The new job, the company says, was created as the result of a survey which indicated that its grow-

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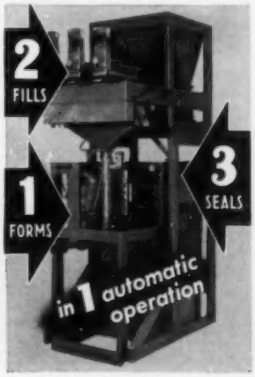

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Plants and people

ing diversity of products posed a definite packaging problem. Mr. Dyer's responsibilities will include the coordination of company efforts toward greater efficiency, better surface design and lower packaging costs.

Sara Little, formerly decoration editor on *House Beautiful* magazine and design consultant to packagers, has opened her own design and development company at 111 E. 56 St., New York.

Joseph T. Woods has been appointed director of research for **Bensing Bros. & Deeney, sub. Sun Chemical Corp.**, Philadelphia. The company make a line of flexographic inks.

A multi-million dollar expansion project, which will include modern packing, inspection and carton-assembly facilities as well as additional glass-container-fabricating machines, has been begun by the Glass & Closure Div. of **Armstrong Cork Co.**, Lancaster, Pa.

Champlain Co., Bloomfield, N. J., has moved its Chicago offices to larger quarters at 7356 N. Cicero Ave. The company manufactures rotary printing presses, paper-converting machinery and electronic control equipment.

Beacon Tag & Label Corp., a new company that will manufacture tags, labels and seals for the packaging and other industries, has begun operations at 735 Tehama St., San Francisco. Principals are **Jack Neely** and **Bob McCormack**.

Food Machinery & Chemical Corp., San José, Calif., has established offices in Geneva, Switzerland, to serve as European liaison center for the company's international operations.

A new oil canning and packaging line, said to be among the fastest in the industry, has been installed for **Shell Oil Co.** at Wood River, Ill.

West Virginia Pulp & Paper Co., New York, has made arrangements to purchase two multiwall bag plants from **Arkell & Smiths**, Canajoharie, N. Y. The facilities are located at Wellsburg, W. Va., and Mobile, Ala.

C. H. Forsman Co., Fairlawn, N. J., has opened a new plant in Fairlawn, producing finished cartons, labels, wraps and other packaging materials.

Owens-Illinois Glass Co., Toledo, O., has opened its seventh glass container sales office in the Pacific Coast Div. at 1027 Rosecrans St., San Diego.

J. D. Cahill Co., Haverhill, Mass., has opened a new laminating plant in Palisades Park, N. J.

A high-speed mill designed to finish foil in up to 66-in. wide coils is now in pro-

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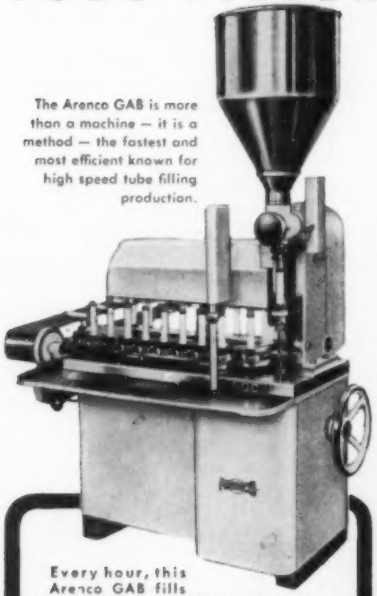

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Plants and people

duction at the Ravenswood, W. Va., plant of **Kaiser Aluminum & Chemical Corp.**, Oakland, Calif.

Errich International Corp. has moved its main offices and showrooms to 35 W. 36 St., New York. The company makes packaging machinery.

Cup-fabricating machinery designed to increase the company's annual production to 10½ billion units is now in production at the new Riverside, Calif., manufacturing plant of **Lily-Tulip Cup Corp.**, New York.

Continental Can Co., New York, is building a corrugated-box-manufacturing plant in Tyler, Tex. It is the company's 16th such plant.

Central Fibre Products Co., Quincy, Ill., has purchased **Fibre Partitions, Inc.**, Peoria, Ill., maker of paperboard products for the packaging industry.

The Chattanooga folding-carton unit of **Container Corp. of America**, Chicago, has been incorporated with the organization's Eastern Boxboard & Carton Div. **Thomas L. Benson, Jr.**, has been appointed gen. mgr. of the company's Chattanooga plants.

Merit Paper Corp., Brooklyn, has been named distributor of **Olin** cellophane in the New York Metropolitan area.

Knox Glass, Inc., Knox, Pa., is constructing its eighth commercial-glass plant at Danielson, Conn. At Oil City, Pa., and Fairmont, Ind., the company recently acquired new mold manufacturing facilities. Knox's enlarged amber-glass plant is now in production at Palestine, Tex.

Southern Printing Ink Corp., Richmond, Va., has entered the gravure-ink field with the enlargement of its South Richmond and Middletown, O., facilities. **James A. Saunders** has been elected a v.p. and director.

Morningstar-Paisley, Inc., New York, plans an expansion of its latex and plastisol sales and technical departments for better service to customers.

Tee-Pak, Inc., Chicago, maker of cellulose casings and film packaging, has opened a new plant in Danville, Ill.

Aaronson Bros. Paper Corp. has moved to 184 Kent Ave., Brooklyn.

A new and expanded coating color plant is to be constructed for the Chillicothe Div. of **The Mead Corp.**, Dayton, O.

The New York office of **Kleen-Stik Products, Inc.**, Chicago, is now located at 7 Central Park West.

Eureka Specialty Printing Co., Scranton, Pa., has purchased **Outserts, Inc.**,

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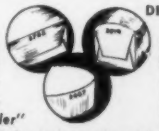

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Plants and people

New York. Outserts makes sealed folders that are attached to the outside of containers and used as an auxiliary advertising medium.

Paterson Parchment Paper Co., Bristol, Pa., has moved its New York sales office to 375 Park Ave. **Bob Ennis** is in charge of the office.

Supermatic Packaging Corp., Newark, N.J., has opened a new showroom, offices and plant at 1460 Chestnut Ave., Hillside, N.J.

M. J. Noble Co., San Francisco, has opened a sales and distribution center at 235 Hindry Ave., Inglewood, Calif. The company makes adhesives for paper, film and boxboard converters.

Bennett Industries, Inc., Peotone, Ill., has installed equipment for the manufacture of fibre drums in conjunction with its steel containers. Production is expected to begin this year.

Carmer Industries, Inc., Kenilworth, N.J., has doubled its facilities for Kel-F, Nylon and Teflon extrusion.

A new, half-million-dollar off-machine coater has been installed at the Antioch Board Mill of **Fibreboard Paper Products Corp.**, San Francisco.

Paper Package Co., Indianapolis, has purchased three buildings to be used for the company's expanded production of formed and fabricated plastic packages and folding cartons.

Jorgenson & Co., San Francisco lithographing and printing firm, has merged with its wholly owned subsidiary, **Knight-Counihan Co. The Pacific Coast Foil Co.**, San Francisco, formerly a div. of Jorgenson, has been created a separate corporation.

Promotions

James P. Lotzer: to national sales mgr., Packaging Materials Service, Div. Milprint, Inc., Milwaukee. He is succeeded as asst. gen. mgr. by **Ken Adams**. The division makes pre-packaging materials.

John C. Brill: to pres., Rathborne, Hair & Ridgway Box Co., Chicago. He succeeds **Robert F. Miles**, now chairman of the board. **Franklin E. Bristol**: to v.p. of sales.

Sidney Fishbane: to pres., **Printing Machinery Maintenance, Inc.**, Brooklyn. **Perry Flanel**: to v.p. of sales. The company rebuilds printing machinery and converts printers into cutters and creasers for the folding-box field.

Frank L. Bracy: to tech. service engineer, **Plax Corp.**, Hartford, Conn. Mr. Bracy will assist customers in adapting

plastic containers to individual packaging requirements.

Richard C. Pilsbury: to New York sales mgr., drug and chemical div., Glass Container Div., **Owens-Illinois Glass Co.**, Toledo, O. **Kenneth E. Rosenbaum:** to sales mgr., Salisbury, N. C., converting plant.

J. Bevans Giles: to asst. to market-development supervisor, **TCF of Canada**, Montreal, maker of transparent cellulose film for packagers.

Samuel Benedict: to sales director, **Fisher's Foils, Ltd.**, Wembley, Middlesex, England, maker of aluminum foils.

Otto Reiner: to v.p. and director of sales, **Birmingham Paper Co.**, Birmingham, Ala. **Robin C. Huckstep,** to sales mgr., packaging division.

Robert D. Hillmann: to asst. district mgr., midwestern district office, Film Div., **Olin Mathieson Chemical Corp.**, New York. He will headquarter in the company's Chicago office.

John A. Segur: to v.p., **Riegel Paper Corp.**, New York. Mr. Segur has been treas. of the company since 1952.

William F. Pfeiffer, Jr.: to div. sales mgr., Mansfield, O., **Stone Container Corp.**, Chicago.

Jackson D. Stafford: to gen. mgr., Pacific Coast Div., **General Printing Ink Co.** General is a div. of **Sun Chemical Corp.**, New York.

Charles Molis: to mgr., set-up-box div., **Pollock Paper Corp.**, Dallas, Tex.

Henry Searles: to regional sales mgr., Western states, Web Div., **American Type Founders Co.**, Elizabeth, N. J. **James Metcalfe:** to regional sales mgr., Midwestern states.

Michael Annick: to v.p., **Rutherford Machinery Co.**, div. **Sun Chemical Corp.**, East Rutherford, N. J. The division manufactures equipment for use by lithographers.

George W. Seagren: to director of research, **Stoner-Mudge Co.**, div. **American-Marietta Co.**, Pittsburgh. The division produces protective coatings for use in the container, paper, textile and plastics industries.

William R. Rifenburgh: to branch mgr., Louisville, Ky., container sales, **Thatcher Glass Mfg. Co.**, Elmira, N.Y. He succeeds **T. H. Effinger,** now mgr. of the company's beer and beverage div.

John C. Milne: to product mgr., compound-applying machinery, Container Products Dept., **Dewey & Almy Chemical Co.**, Div. **W. R. Grace & Co.**, Cambridge, Mass.

Raymond P. Hohman: to Southwest rep., **Sefton Fibre Can Co.**, St. Louis. The company is a sub. of **Container Corp. of America**, Chicago.

Hans J. Remmert: to sales director, Continental Europe, **Mead Board Sales**, Cincinnati, sub. **The Mead Corp.** He

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Plants and people

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John Dersch: to gen. prodn. mgr., coatings and adhesives, **Borden Chemical Co.**, New York.

Appointments

William Schlackman: to director, new Package Research Div., **Institute for Motivational Research,** Croton-on-Hudson, N. Y.

Joseph J. McLoughlin: to market-research mgr., **Taylor Fibre Co.,** Norristown, Pa., maker of fibres and laminated plastic materials.

George Mikan, for many years the top star in the National Basketball Assn. as center for the Minneapolis Lakers, has joined the container-sales staff of the Forest Products Div., **Olin Mathieson Chemical Corp.,** New York.

David G. Smith: to sales mgr., **Niagara Box Co.,** Fairlawn, N. J.

Claude Applegate: from **Hinde & Dauch** to v.p., **Thompson-Leeds Co.,** New York, maker of point-of-purchase merchandisers and displays.

Milton Kaplow: from food technology dept., University of Miami, to associate technologist in the Packaging Laboratory, **General Foods Research Center,** Tarrytown, N. Y.

Anthony Nelson: from **Harley Earl, Inc.,** to project head, package and product design, **Robert Zeidman Associates,** New York. **Harry Sooy:** to project head, package and product design.

James F. Donovan: to Midwest sales mgr., **Packaging Materials Service, Div. Milprint, Inc.,** Milwaukee.

Robert C. Graham: to mgr., Kivar sales, **The Plastic Coating Corp.,** Holyoke, Mass. He succeeds **Arthur M. Butler,** resigned.

William R. Reder: from **Ekco-Alcoa Container** to advtg. mgr., **Dutch Brand Div., Johns-Manville Corp.,** New York.

Joseph G. Shedd: to v.p. and gen. mgr. of mfg., **Fulton Bag & Cotton Mills,** Atlanta.

Paul Kosene: to p. r. director, **Jim Nash Associates,** New York.

Obituaries

Charles A. Cass, former member of the board of directors and secy. of **West Virginia Pulp & Paper Co.** until his retirement in 1947, died on April 23 at his home in New York after a long illness. Mr. Cass had been with the company for 45 years.

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TEMPERATURE CONTROLLER. Illustrated 2-page bulletin describes and gives specifications of an electronic, single-knob proportional temperature controller with independent control and temperature indicating functions. Electronic Processes Corp. of California. (F-850)

COLLAPSIBLE TUBES. Catalog gives specifications and describes uses for tin, lead, aluminum, single and multi-use, lined and unlined collapsible tubes and shells, and a variety of special-purpose tube openings, strips, closures, applicators, metal can spouts. Standard Collapsible Tube Co. (F-851)

BAG-CLOSING MACHINES. 4-page illustrated catalog gives details on a continuous motion double-fold unit, a coffee bag closer, a sealer-gluer closer, and a double folding heat-sealing adjustable sealer. George H. Fry Co. (F-852)

FIBRE CANS. Literature illustrates line of metal-capped, all-fibre, lined and unlined fibre cans. Includes data on can construction and on such dispensing devices as pouring spouts, plugs and sifters. The Cleveland Container Co. (F-853)

CARTONING EQUIPMENT. Illustrated 8-page brochure gives detailed analysis of the design, construction and operating features of a high-speed fully automatic "constant motion" cartoner. R. A. Jones & Co., Inc. (F-854)

ELECTRONIC COUNTERS. 40-page illustrated data sheet release describes features and applications of a series of electronic counters, interval timers, reflected light photo heads and photoelectric controls. Post Machinery Co. (F-855)

PLASTIC STOCK VIALS. 4-page illustrated catalog lists containers with metal and plastic screw caps, and slip-on and plug closures; also sifter fitments and double-ended vials for single or double packaging in one container. Lermer Plastics, Inc. (F-856)

TRANSFER LABELING. 4-page folder describes and contains sample of company's "Therimage" label paper whose printed surface, through application of heat and pressure, can be transferred from the paper to packaging materials. Method of applying the transfers by machine is also described. Dennison Manufacturing Co. (F-857)

GLASS CONTAINERS. 16-page catalog contains illustrations and specifications of stock mold glass containers made by this company. Line includes beer, wine and liquor bottles; jars, juice and ketchup bottles; Boston round; etc. Thatcher Glass Manufacturing Co., Inc. (F-858)

HEAT SEAL COATINGS. Technical data sheet gives properties, specifications and recommended applications for three special-purpose heat seal coatings suitable for glassine, paper, foil, acetate and candy bar wraps. Chemical Div., The Borden Co. (F-859)

FORMABLE THERMOPLASTIC SHEET. Catalog file describes line of styrene, cellulose acetate, cellulose butyrate, and polyethylene sheet and film materials for skin and blister packaging. Price lists included. Campco Div., Chicago Molded Products Corp. (F-860)

BAG MACHINE. 8-page illustrated bulletin describes a unit that fills, heat seals, prints, cuts off and counts bags at speeds up to 6,000 bags an hour. Unit handles small hardware items either in single or multiple packs. Product Packaging Engineering. (F-861)

PACKAGING MAJOR APPLIANCES. 28-page brochure contains case histories of successful applications of heavy-duty corrugated containers in the packaging of water heaters, stoves, washers, furnaces and other large appliances. Gaylord Container Corp. (F-862)

SEAMER FOR FIBRE CANS. Illustrated folder describes operating features and gives specifications of equipment that applies bottoms and tops to fibre cans at speeds from 100 to 400 cans a minute. Potter & Johnston Co. (F-863)

BOTTLE WADDERS. 4-page illustrated brochure describes the features, dimensions and operations of a line of machines for automatically wadding tablet and capsule bottles at rates up to 250 a minute. Consolidated Packaging Machinery Corp. (F-864)

INNERSEALER. Illustrated bulletin describes an adaptable, automatic machine for sorting, feeding and applying innerseals at speeds up to 120 per minute. Specifications and diagrams included. Resina Automatic Machinery Co. (F-865)

SEMI-AUTOMATIC LABELERS. Illustrated literature outlines operations, features, specifications and modifications of a semi-automatic spot- and wrap-around-labeler for 2 oz. to 5 gal. bottles, cans, aerosols and drums. Long and Company, Inc. (F-866)

CONVERTER GUIDE. Two 6-page booklets give eastern (or western-delivered prices), characteristics and general uses of "Avisco" cellophane, and note approximate competing grades. American Viscose Corp. (F-867)

PACKAGING MACHINES. 8-page illustrated brochure presents features and technical data on lines of bag forming, filling and sealing; carton forming; overwrapping; direct wrapping and bundling machines. Includes size ranges and accessories. Package Machinery Co. (F-868)

COLOR TRENDS. 4-page booklet surveys America's taste in colors during the past 25 years, noting how it has changed concurrently with national and world events. Faber Birren & Co. (F-869)

CASE SEALERS. 6-page illustrated booklet discusses the design and operation of a line of automatic and semi-automatic variable-width top and bottom case sealers. Specifications, diagrams and optional equipment included. A-B-C Packaging Machine Corp. (F-870)

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REGISTER CONTROL EQUIPMENT. Three illustrated bulletins discuss cut-off register controls for wrapping, bagging (etc.) machines; photoelectric side register controls for slitting, trimming (etc.) operations; and one-way cut-off register controls for medium-accuracy web-fed machines. General Electric. **(F-871)**

UNIT PACKAGING. 6-page illustrated booklet covers the features and specifications of a line of automatic package-forming, filling and heat-sealing packaging machines for foods, pharmaceuticals and flexible materials. Roto-Wrap Machine Corp. **(F-872)**

COLLAPSIBLE METAL TUBES. 7-page illustrated brochure describes the uses, types and specifications of fold-up metal tubes for foods, medicines, pharmaceuticals, etc. Also discusses this company's consulting and manufacturing facilities. White Metal Mfg. Co. **(F-873)**

CORRUGATED BOX PRE-PACKAGING. 30-page booklet discusses the pre-packaging of multiple-unit products in corrugated containers ready for sale. Lists requisites of good pre-packaging and points to advantages on all levels of distribution. Hinde & Dauch. **(F-874)**

FILLING, SEALING, CLEANING MACHINES. 4-page illustrated brochure describes lines of automatic lid dispensing and sealing machines, viscous-products filling machines and bottle cleaning machines. The Karl Kiefer Machine Co. **(F-875)**

WEB CONDITIONER. Illustrated data sheet describes a printing press attachment that restores to cellophane, glassine and paper the moisture lost to heat in the ink-drying process. S. W. Speers Co. **(F-876)**

FOIL PAN-PACKAGES. Illustrated 4-page folder describes advantages of a line of stock foil pan-packages for baked goods. Units serve as both baking pans and as ultimate consumer containers. Ekco-Alcoa Containers, Inc. **(F-877)**

CASING CLOSURE. 4-page illustrated folder describes a portable pneumatic-powered machine that puts first and second ties (metal clips) on all types of large and small film and fiber casings and bags. Tipper Tie, Inc. **(F-878)**

PARTS FEEDERS. 16-page illustrated catalog lists data and specifications on its lines of electromagnet-driven, and hydraulic and pneumatic-powered "vibratory" parts feeders and parts feeder components. Syntron Co. **(F-879)**

CHECKWEIGHERS. File of illustrated data sheets describes a line of high-speed checkweighers, rotary package timers, material handling systems and related accessories. Diagrams, specifications and engineering applications included. Hi-Speed Checkweigher Co., Inc. **(F-880)**

IMPRINTING MACHINES. Illustrated 4-page booklet describes line of automatic coding, marking and imprinting machines and attachments for production-line printing of packages, parts and products. Adolph Gottscho, Inc. **(F-881)**

PRODUCT DECALS. Folder gives information on two adhesive films, yellow or white vinyl, and metalized chrome-tint "Mylar" polyester which can be printed, silk-screened or die-cut and used for plastics product identification or decoration. Fasson Products. **(F-882)**

PREPACKAGING SWEATERS. Consumer attitudes toward sweater prepackaging are summarized in a 12-page report based on a buying habit and preference study of 3,000 purchasers. E. I. du Pont de Nemours & Co. **(F-883)**

BAG SEALER. Illustrated bulletin describes continuous, adjustable, double-folding and heat-sealing bag sealer for food and chemical products. Includes specifications. George H. Fry Co. **(F-884)**

NET WEIGHERS. Illustrated bulletin describes a line of 2 to 16-oz. single-shot, high-speed, flexible weighers for high density products. Includes diagrams and specifications. The Woodman Co. **(F-885)**

CASE PACKERS. Illustrated 4-page catalog describes a line of side-loading case packers. Includes specifications, diagrams and operating details. Burt Machine Co. **(F-886)**

WEB TENSION INDICATOR. 2-page bulletin discusses the operation and features of an instrument for measuring tension and indicating fluctuations in moving or stationary webs. Includes diagram and specifications. John Dusenbery Co., Inc. **(F-887)**

BAG-CLOSING EQUIPMENT. File of illustrated catalog sheets describes a line of portable electric machines and related accessories for closing textile and paper bags. Specifications included. Dave Fischbein Co. **(F-888)**

BAG PACKAGING. Illustrated brochure discusses automatic single-tube machines for forming, filling and heat-sealing plastic and plastic coated bags. Includes diagrams, specifications and operating features. General Packaging Equipment Co. **(F-889)**

PACKAGING EQUIPMENT. Illustrated bulletin describes an automatic machine for pillow and four-seal bag forming, filling and heat-sealing. Includes information on optional net-weight scales units. Stokes & Smith Co. **(F-890)**

BALE SEALER. 6-page illustrated brochure describes an automatic bale sealer for sealing up to 12 average size bales per minute. Tol-O-Matic, Inc. **(F-891)**

PRINTING AND EMBOSSING ROLLS. 16-page illustrated booklet describes facilities of this company for the manufacture of flexographic, gravure, embossing, applicator, and other types of industrial rolls and cylinders. Paper Machinery & Research, Inc. **(F-892)**

FOIL WRAPS. Folder, containing extensive selection of samples, describes sulphite paper-backed, heat-seal coated, foil overwrap materials. Rap-In-Wax Paper Co. **(F-893)**

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New York 14, N. Y.

Brilliant visual salesmanship with four colors on LATEX COATED boxboard

Four-color reproduction like this on boxboard coated with Dow Latex can help increase sales appeal. Take advantage of better printability, gloss, improved ink holdout, and greater wet-rub resistance.

DOW

No. 1 in a series on latex coated boxboard

LATEX COATED

Notice the quality reproduction and fidelity of detail on this four-color reproduction, printed on .015 pt. trailing blade latex coated boxboard.

For fine quality reproduction, specify latex coated boxboard

The superior printability that Dow Latex gives boxboard means extra eye appeal that stimulates sales . . . packages that sparkle with sales appeal. And the improved gloss keeps packages looking their best.

If you coat or manufacture boxboard, your advantages with Dow Latex will include heavier coating weights, higher machine speeds, shorter drying time and broader applications at attractive costs.

Four-color printing on latex coated boxboard is sharp and clear . . . presents products in a way that means sales!
For more complete information on latex for coated boxboard, write THE DOW CHEMICAL COMPANY, Midland, Michigan, Coatings Sales Dept. 2159.

YOU CAN DEPEND ON DOW

Do you remember "Lizzie"?

Certainly! Good old Model "A" succeeded the highly popular Model "T" and helped to put America on wheels. Do you recall the price? The record shows that in 1925, a Model "A" cost $375.00! You may be stunned at the vast difference in price compared to today's "Low-cost" cars, but don't overlook the difference in built-in values. Today's cars provide safety, speed, dependability, comfort . . . more improvements, refinements, and innovations than we can begin to list.

In flexographic printing, the end printer behind bag machines was one of the earliest popular models . . . the model "T" so-to-speak, in its line. Since 1925, end-printers have been redesigned over and over again until today, they are so far advanced, they cannot be compared in speed, efficiency and printing quality with similar printers of a generation ago.

However, too many converters still limp along with this oldtime equipment and sacrifice profits by turning out Model "T" work. If *your* plant needs upgrading, do it by installing our truly modern, highly efficient Alina-X-30, a *really* versatile end-printer. Only a modest investment is required and Alina-X-30 will start to earn larger profits for you from the first day you put it to work—Send for our folder, X-30.

H. H. HEINRICH CO. 111 Eighth Avenue, New York 11, N. Y.

The most complete line of proven Flexographic Presses, Bag-Machines, Multiwall equipment and Extruders for thermoplastic materials

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STAMPS & SEALS: fund raising, trading, premium, approval, promotional, safety
LABELS: packaging, special offer, dealer aid, pricing, mailing, shipping, advertising
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FORMS: roll, flat, padded, carbonized sets, die cut, fan folded, embossed, punched
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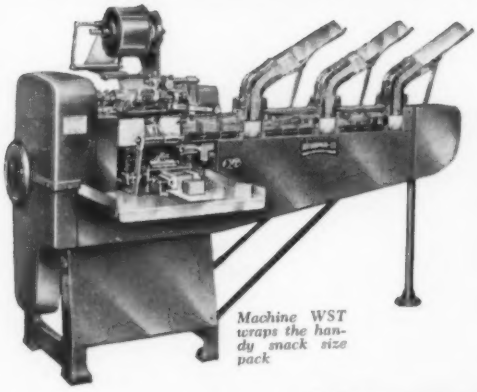
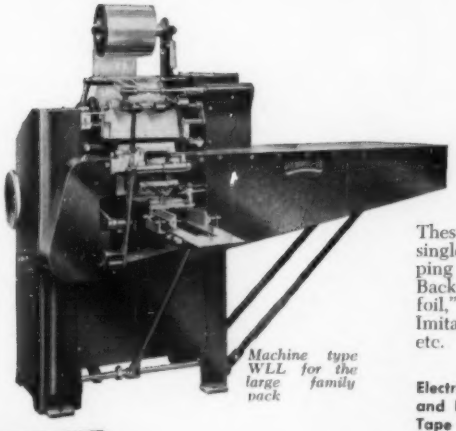


Machine WST wraps the handy snack size pack



Machine type WLL for the large family pack

These machines offer single or double wrapping in Film, Foil, Backed Foil, "Fiberfoil," Waxed Paper, Imitation Parchment, etc.

Electric Eye Registration and Easy Opening Tear Tape Optional

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W.T./38

For your information

The fifth annual **Fibre Box Competition** will be held in Washington, D.C., April 7-10, 1959. The competition is sponsored by the **Fibre Box Assn.** **Charles U. Harvey** of Robert Gair Paper Products Group, Continental Can Co., and chairman of the association's Competition Committee, says that eligible entries include new corrugated and solid fibre boxes and new uses of fibreboard developed after Sept. 1, 1957. The competition, entailing 12 end-use classifications and six specialty groups, opens Nov. 15, 1958, and closes Jan. 20, 1959. Official rules and other information will be made available by FBA.

An aerosol research laboratory has been opened at the Columbia University College of Pharmacy in New York. Built with the aid of a grant from **Aerosol Techniques, Inc.**, Bridgeport, Conn., the new facility will be used as part of Columbia's graduate program for research projects involving the development of pharmaceutical pressurized-dosage forms. A major portion of the proposed research will encompass the study of variables affecting the stability and efficiency of aerosol medications.

The fourth **Joint Military-Industry Packaging and Materials Handling Symposium** will be held in Washington, D.C., Sept. 30-Oct. 2. Packaging and handling for shipment and new packaging equipment and supplies are among the topics to be discussed under the main theme: "Imagineering to Meet Tomorrow's Needs." The symposium is open to anyone in Government or industry concerned with packaging, shipping and materials handling. Programs and registration forms will be available after July 1. Further details may be obtained by contacting: Head, Packaging Section, Supply Programs Div., Office of Naval Material, Washington 25, D.C.

John L. Kronenberg of S. D. Warren & Co. has been named chairman of the newly organized Lithographic Printing Committee of the **Packaging Institute.** **Alan R. Winslow** becomes technical coordinator and editor of PI's newsletter.

PI reports also that it is making available copies of papers delivered at the first special technical sessions of the recent **Packaging Machinery and Materials Exposition** in Atlantic City (See *"Machinery Show Makes News,"* MODERN PACKAGING, May, p. 202.) Complete sets, at $5 each, can be obtained from the Packaging Institute, 342 Madison Ave., New York 17.

Now available from **Packaging Machinery Mfrs. Institute** is the third edition of its *Official Packaging Machinery Directory.* Divided into three sections, the directory contains: 149 packaging-machinery trade names; listings of all PMMI members, including addresses, telephone numbers, executive personnel and equipment manufactured, and 250 packaging classifications and lists of companies manufacturing machines for each classification. The directory is available without binder at $5, with binder at $12.50, from PMMI headquarters at 60 E. 42 St., New York 17.

New officers were elected by the **Point-of-Purchase Advertising Institute** at its recent 12th Annual Exhibit in New York. They are: pres.—**O. H. Stark,** Snyder & Black; board chairman—**Stanley L. Wessel,** Stanley Wessel & Co.; first v.p.—**William M. Harris,** Wm. Melish Harris Associates; Eastern v.p.—**Ray Dubrowin,** U. S. Printing & Lithograph Co.; Western v.p.—**John R. Webb,** Magill-Weinsheimer Co.; treas.—**Harry Fenster,** I. Fenster & Sons. **William W. Mee** continues as exec. director.

Stark

Wessel

L. E. Oswald of E. F. Schmidt Co. was elected pres. of **Lithographers National Assn.** at the group's recent annual meeting in Phoenix. Other new officers are: v.p.—**William E. Zabel, Jr.,** of Zabel Bros. Co., Philadelphia, and treas.—**J. Louis Landenberger** of Ketterlinus Lithographic Mfg. Co., Primos, Pa. **Oscar Whitehouse** was re-elected exec. director of the association.

At the LNA meeting, **Ralph J. Wrenn** of Stecher-Traung Lithograph Corp., San Francisco, was named chairman of the group's new Label Mfrs. Section.

The **U. S. Dept. of Commerce** is asking for help from the packaging-machine industry in organizing the U. S. Government exhibit which will be shown at the **Yugoslavia International Trade Fair** in Zagreb, Sept. 6-21. As part of the U.S. exhibit, packaging machines will be installed and operated. Machinery manufacturers interested in lending packaging machines for this purpose are asked to contact the Procurement Div., Office of International Trade Fairs, U. S. Dept. of Commerce, Washington 25, D.C.

"This is Du Pont," a 52-page, picture-magazine-format booklet, has been published by **E. I. du Pont de Nemours & Co.,** Wilmington. The booklet explores the role of the industrial corporation in modern American society and discusses the part played by Du Pont's more than 1,200 product lines, including materials supplied by the corporation to the packaging and plastics industries.

National Starch Products, New York, has renewed its sponsorship of a four-year, $2,000 scholarship in packaging at Michigan State University. The company reports that selection of the student to be awarded the scholarship will be made by the **Packaging Institute.** MSU currently is the only institution of higher learning in the U.S. that offers students a full four-year course which leads to the degree of Bachelor of Science in Packaging.

An **International Packaging Exhibition,** designed to function as a "comprehensive survey of package design," is being sponsored by **The Museum of Modern Art,** New York. To be held at the museum in autumn 1959, the exhibit will include examples of the outstanding contributions of designers and engineers to packaging, with emphasis on the imaginative use of new and old materials. Packages to be shown will be selected from the United States, Latin America, Europe and Asia, and will include current and experimental examples. Further details are available from Arthur Drexler, director, Dept. of Architecture and Design, The Museum of Modern Art, 11 W. 53 St., New York 19.

A folder describing the advantages to manufacturer, retailer and consumer of polyethylene packaging for textile products is offered by **Continental Can Co., Shellmar-Betner Div.** Titled, "It's in the Bag," the folder comes in a printed polyethylene bag. Copies are available without charge by writing to Shellmar-Betner's offices in Mt. Vernon, O.

The fourth **International Congress on Food Distribution,** sponsored by AIDA (Assn. Internationale de la Distribution des Produits Alimentaires) will be held in Lausanne, Switzerland, June 22-26, 1959. In connection with the congress,

Events

June 10-12—**Advertising Trades Institute,** 5th annual sales-aids show, Shelton Hotel, New York.

June 22-24—**National Wooden Pallet Mfrs. Assn.,** 12th annual meeting, Grove Park Inn, Asheville, N.C.

June 22-28—**International Design Conference,** Aspen, Colo.

June 25-28—**Toilet Goods Assn.,** annual convention, Poland Spring, Me.

June 26-27—**Society of the Plastics Industry,** Midwest section conference, French Lick-Sheraton Hotel, French Lick, Ind.

July 4-5—**Service Merchandisers Assn.,** first convention, Ambassador Hotel, Atlantic City.

July 7-10—**National Confectioners Assn.,** annual convention and exposition, Civic Auditorium, San Francisco.

July 7-11—**National Housewares Mfrs. Assn.,** 29th national exhibit, Auditorium, Atlantic City.

an **International Food Exposition** will be held in the same city, June 13-28. The food exposition will include exhibits of packaging machines and materials.

Russell H. Winters, exec. v.p. for sales, National Can Corp., has been elected chairman of the Vegetable Research & Marketing Advisory Committee, **U. S. Dept. of Agriculture**, Washington, D.C. He also is a director of National Canners Assn. and the National Assn. of Frozen-Food Packers.

At the recent midwest meeting of the **Fibre Can & Tube Assn.** in Chicago, the organization's managing director, **Paul Hanway**, said that NFCTA is undertaking a broad market development and product expansion program. Despite some cutbacks in orders from basic industries, said Mr. Hanway, fibre can and tube manufacturers can look forward to "the best business year in history," due in large measure to the industry's current long-range business-building public-relations program.

"Sunny-Pak," a 14-min., color-and-sound motion picture from the **Marathon Div., American Can Co.**, explores the problems of grower-level pre-packaging of fruits and vegetables. The film also shows how the company's "Sunny-Pak" corrugated-bottom carton eliminates the need for rehandling or repackaging produce at the retail level. Film bookings are being handled by Marathon's advertising department, Menasha, Wis.

The annual membership meeting of the **Glass Container Mfrs. Institute** was held at The Greenbrier, White Sulphur Springs, W. Va., May 20-23. Among the speakers were **Edmund F. Ball**, GCMI president, and **W. E. Hoadley, Jr.**, of Armstrong Cork Co. The program committee included chairman **J. C. Feadley** of Armstrong, **C. G. Bensinger** of Owens-Illinois Glass Co. and **J. S. Heuisler** of Maryland Glass Corp.

The **Fibre Box Assn.** has released a 27-page illustrated report titled "The Effect of Varying the Gap Between the Outer Flaps of Corrugated Boxes for Canned Goods." The association engaged an independent packaging-testing organization (Container Laboratories, Inc., New York) to determine if corrugated boxes with an opening between the top flaps could be used successfully and practically for shipping all varieties of canned goods. Tests conducted by the organization, as revealed in its report, "proved that as the openings between the outer flaps increased, the boxes became progressively weaker, the cans were more severely damaged and greater amounts of foreign matter entered the box to contaminate the cans."

Further information is available from Fibre Box Assn., 224 S. Michigan Ave., Chicago 4.

The foundation meeting of the **German Aerosol Assn.** (Interessen-Gemeinschaft Aerosole) was held in Frankfurt on April 15. Association officials say that about 100 European companies will become members eventually.

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...custom-made...
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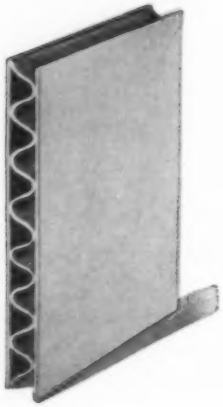
What you should know about

Why do they put "permanent waves"



"flutes" in Union Boxes

in corrugated boxes?

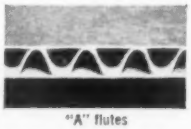
The small "waves," or flutes, in the center section of corrugated board are a vital box construction feature. Like bridge trusses, they absorb and distribute shock — provide extra rigidity for the walls of your shipping container.

Flutes are like bridge trusses

All flutes, as the illustrations show, are not alike. No one is "best." Each does a specific job. Selecting the type you should be using calls for a detailed analysis of your product. This is one small part of Union's complete package engineering service. These fundamentals, however, are excellent guideposts:

The corrugator forms the flutes

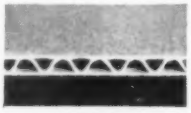
An "A" for cushioning



"A" flutes

"A" flutes were the first type used in corrugated box manufacture. They have the highest arches—about 3/16 inch. "A" flutes are generally used for fragile articles because their greater height offers extra cushioning protection and better stacking strength.

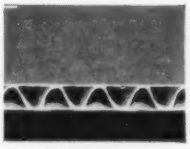
"B" flutes–smallest and stiffest



"B" flutes

"B" flutes are lower, stiffer than "A," have 42 per cent more flutes per foot. Because of reduced thickness, "B" flute board makes a neater package, takes up less warehouse and car space. Excellent for heavy items like canned goods which support their own weight, thus require less shock resistance.

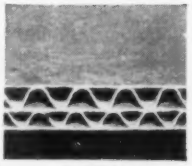
"C"—the in-between flute



"C" flutes

Half-way and happy medium between "A" and "B" are "C" flutes, probably the most commonly used today. They combine the best features of the other two and are often an excellent compromise.

Combinations may be needed



"C"-"B" flutes

Flutes may also be combined, one on top of the other, to form a double wall container. The combinations most generally used are "A"-"B" and "C"-"B." The double walls provide greater protection and cushioning, and are ideal for heavy duty containers.

Union Box engineers are always ready to help you determine the proper flute, or combination. You'll find, too, that the flutes in Union Boxes are consistently well formed—each of uniform height—each taking its full share of the load.

This sturdy construction is one of your best assurances of dependable performance of your corrugated shipping container.

union camp

Write for Union's free, informative booklet "Manufacturing Sheets for Corrugated Boxes."

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UNION BAG-CAMP PAPER Corporation
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Southern Division—P.O. Box 570, Savannah, Ga.; P.O. Box 454, Lakeland, Fla.
Western Division—4545 W. Palmer, Chicago, Ill.

U. S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps not accepted. Edited by H. A. Levey.

Strippable and Nonstrippable Label Combination and Method, Milton Schor (to A. H. Wirz, Inc., Chester, Pa., a corporation of Pennsylvania). U.S. 2,825,159, March 4. A smooth container, in combination with a layer of plastic film adhesively bonded to the container and having label information thereon, and a layer of plastic film-forming resin being strippable from the container and the adhesively bonded label by tearing and peeling.

Dispensing Carton for Rolled Sheet Material, William M. Henry (to The Dow Chemical Co., Midland, Mich., a corporation of Delaware). U.S. 2,825,451, March 4. In a carton: two relatively stiff end-reinforcing walls, each having a substantially central circular opening, cylindrical roll-supporting stubs and flap means for positively anchoring said end-reinforcing walls against falling out of said carton.

Cap Seal, Constantine Lisciana (to The Protectoseal Co., Chicago, a corporation of Illinois). U.S. 2,825,484, March 4. A cap seal comprising a flat disk-like metal closure member provided with an annular peripheral member providing a space to receive a backing member.

Container for Lamp Bulbs or the Like, Paul W. Miessler (to The Hankins Container Co., Cleveland, a corporation of Ohio). U.S. 2,825,496, March 4. A collapsible container for lamp bulbs or the like, comprising a tubular open-ended sheath having unbroken, flat top, bottom and side walls and divider walls.

Refrigerating Package, Wil Evans (to Mrs. Ruby Alice Hodsell), Oakland, Calif. U.S. RE. 24,443, March 11. A package for forming a refrigerating element comprising: a bag having an open end portion, a liquid-impervious tube enveloped by said bag, a body of dry liquid-absorptive fibrous material in said tube and clamping means for releasably holding the folded ends in closed position.

Method of and Machine for Making Packets, Roderick W. Hoag, Melrose, Mass. U.S. 2,826,020, March 11. A method of making packets of tea, sugar or other commodities, comprising: providing a strip of material with spaced groups of cell-forming folds or flutes disposing the fluted strip on a plane, backing strip with flutes opening toward same, partially sealing the strips, filling the cells, sealing the strips along the opposite edge thereof, and finally severing the strips intermediate the cells.

Package Forming and Filling Machine, Jacob Petrus Matheus van den Berg et al (to Package Machinery Co., East Longmeadow, Mass., a corporation of Massachusetts). U.S. 2,826,021, March 11. In a packaging machine, a tube former for producing from web-packaging material a tube from which sections may be transversely sealed and severed to provide a succession of packages.

Apparatus for Stacking and Packing Articles, Karl Bofinger (to American Can Co., New York, a corporation of New Jersey). U.S. 2,826,023, March 11. In an apparatus for stacking articles, the combination comprising a magazine for receiving and forming a stack and an inflatable gripper at the opening.

Machine for Making and Filling Sealed Packages, George A. Swartz (to Ivers-Lee Co., Newark, N.J., a corporation of Delaware). U.S. 2,826,025, March 11. In a packaging machine, the combination with means for guiding a plurality of continuous strips of packaging material, sealing mechanism and automatic means for selectively scoring and severing said chain of containers.

Machine for Applying Covers to Dishes, James E. Annen (to Sutherland Paper Co., Kalamazoo, Mich., a corporation of Michigan). U.S. 2,826,026, March 11. A machine for applying covers having downturned flanges to dishes having outwardly projecting rims.

Machine for Making Paper Boxes, Clayton Straw (to Henry Russell Davis, Jr., So. Lincoln, Mass.). U.S. 2,826,127, March 11. In a box-making machine, in combination, a vertically reciprocating form, blank-feeding devices, movable corner blocks, corner pressers and means for folding the side flaps of the box blank around the form.

Carrying Device for Containers, Russell C. Taylor (to American Can Co., New York, a corporation of New Jersey). U.S. 2,826,298, March 11. The combination of a plurality of containers arranged in juxtaposed relation, a tab carried on each of said containers and means securing together the free ends of said tabs to produce a handle.

Carrying Handle for Tied-Together Containers, Charles H. Erne (to American Can Co.). U.S. 2,826,299, March 11. A device for carrying a plurality of juxtaposed rectangular fibre containers having at their top ends laterally projecting peripheral ledges.

Container for Disposable Tissues, Manuel U. Musler, New Haven, Conn. U.S. 2,826,334, March 11. A container being of oblong form in plan, the top of the container having a longitudinal tear strip, and a pair of elastic cords fixed to the fibrous material of the container.

Dispensing Closure, Lido Albiani (to Morton Salt Co., Chicago, a corporation of Illinois). U.S. 2,826,343, March 11. A dispensing closure comprising a tubular member having a depending peripheral flange on its inner face.

Container with Sanitary Pouring Surface and Protecting Barriers, George O. Schroeder and Kennerd M. Frase (to American Can Co., New York, a corporation of New Jersey). U.S. 2,826,348, March 11. A container for holding and dispensing liquid products, having a substantially flat extension overlying and covering said wall around said opening, and a central closure flap.

End-Closing Carton, Frank A. Marx (to Richardson Taylor-Globe Corp., Cincinnati, a corporation of Ohio). U.S. 2,826,350, March 11. A blank of material for forming a hexagonal carton for effecting temporary closure of one end of the completed carton, and flap means formed at the opposite end of said blank for effecting permanent closure.

Ice-Cream Receptacle, Wilbur G. Anderson, Jr. (to American Box Board Co., Grand Rapids, Mich., a corporation of Michigan). U.S. 2,826,351, March 11. A receptacle of generally rectangular cross section having four vertical sides, a bottom section, two intermediate bottom sections and one lower bottom section under the intermediate bottom sections.

Machine for Setting Up Bottle Cartons, Hermond G. Gentry (to Mead-Atlanta Paper Co., a corporation of Ohio). U.S. 2,826,409, March 11. In a machine for setting up collapsible bottle cartons in which a hopper structure is provided to contain a stacked supply of said bottle cartons in collapsible form, means for partially stripping successively from said stacked supply the lowermost bottle carton and a pair of feed rolls being driven for feeding a gripped bottle carton at greater speed than the bottle cartons are advanced.

Magazine for Feeding Flat Carton Blanks, Charles Z. Monroe and Dwight German (to Ex-Cell-O Corp., Detroit, a corporation of Michigan). U.S. 2,826,411, March 11. In a magazine for feeding flat carton blanks, the combination comprising lateral guide members open at the botom for receiving a stack of the carton blanks and aligning the edges vertically thereof and an open pusher carriage having spaced vertical arms.

Packing Machine, Ki Negoro (to Bartelt Engineering Co., Rockford, Ill., a corporation of Illinois). U.S. 2,826,881, March 18. In a packaging machine, the combination of a carrier for supporting a plurality of empty cartons and a conveyor for supporting a plurality of bags.

Wrapper-Cutting Machine, Thormod Jensen (to Pollock Paper Corp., Dallas,

a corporation of Texas). U.S. 2,826,882, March 18. A wrapper-cutting device which comprises means for supporting a forwardly moving web of wrapper material, electric signal-producing means, means for moving the article to be wrapped into contact with an end portion of said web laterally to envelope the article and a cutter.

Carton-Erecting Machine, Glenn B. Hatcher (to Bloomer Bros., Newark, N.Y., a corporation of New York). U.S. 2,826,967, March 18. A machine for setting up collapsible cartons of a type having front and rear walls hingedly attached to the opposite sides of the bottom wall, and a top wall having transverse members adapted to be swung downwardly in setting up the carton.

Box-Fabricating Mandrel, Paul Wasyluka and Edward A. Haeussler (to Crown Zellerbach Corp., San Francisco, a corporation of Nevada). U.S. 2,826,969, March 18. A fabricating mandrel for a box having inwardly projecting parts.

Packaging Machine, Harry E. Engleson and Elmer D. Srameck (to F. B. Redington Co., Chicago, a corporation of Delaware). U.S. 2,827,148, March 18. In a machine having an intermittently movable conveyor with a plurality of buckets thereon and with each bucket having a fixed number of parallel grooves, apparatus for loading each of said buckets with a predetermined number of articles.

Carton Convertible to Display Container, Edward B. Garman (to Owens-Illinois Glass Co., a corporation of Ohio). U.S. 2,827,162, March 18. A conventional shipping carton which is convertible into a display container, said carton formed of a foldable paperboard material and comprising rectangular top, bottom, front, rear and side walls.

Display Box, Richard C. J. Palson (to The Farrington Mfg. Co., Boston, a corporation of Massachusetts). U.S. 2,827,163, March 18. A display box comprising a base, a removable cover and a metallic clip.

Paperboard Wrapper for Cans and the Like, Hermond G. Gentry (to Mead-Atlanta Paper Co., a corporation of Ohio). U.S. 2,827,165, March 18. A package of cylindrical objects, such as cans, said package comprising a four-sided wrapper with open ends and a row of said objects enclosed thereby.

Composition for Producing Jar Rings, Albin H. Warth (to Crown Cork & Seal Co., Baltimore, a corporation of New York). U.S. 2,827,192, March 18. A container including a body portion, a closure and a gasket made from a composition comprising about 56 to 94% of a conjugated butadiene rubbery polymer, about 6 to 44% of a wax composition.

Apparatus for Feeding Cleats to Box-making Machines, David G. Kingsley (to Stapling Machines Co., Rockaway, N.J., a corporation of Delaware). U.S. 2,827,201, March 18. Apparatus for dispensing cleats of two different lengths into alternate spaces between the push elements to the moving conveyor bands of a box-nailing machine.

Bottom-Closure Assembly for Containers, Isaac L. Wilcox (to Sealright-Oswego Falls Corp., Fulton, N.Y., a corporation of New York). U.S. 2,827,218, March 18. A bottom-closure assembly for a container, comprising a bottom closure having a central discoidal portion encircled by a depending flange.

Liquid Applicator and Dispenser, Elliott Morrill and Leslie M. Clark (to The Best Foods, Inc., New York, a corporation of New Jersey). U.S. 2,827,651, March 25. An apparatus comprising a flexible resilient container, a closure and an applicator surface on one side.

Apparatus for Use in Wrapping Packages, Herbert Rumsey, Jr. (to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut). U.S. 2,827,743, March 25. Apparatus to be used in the wrapping of packages, comprising a supporting structure, means for rotatably supporting a roll of sheet wrapping material, elongated heat-severing means and a guide bar and retractor.

Container-Feeding Mechanism, Rudolph H. Breeback (to Crown Cork & Seal Co., Baltimore, a corporation of New York). U.S. 2,827,998, March 25. A mechanism for feeding and transferring articles.

Apparatus for Grouping Containers in Different Combinations for Transfer to Stacks, Harold C. Hebert (to American Can Co., New York, a corporation of New Jersey). U.S. 2,828,000, March 25. An apparatus for forming groups of tubular containers for transfer to a stack, comprising a conveyor extending along a path of travel, actuating means, feeding means and stop means.

Folding Carton, Vernon R. Fryburger (to United States Printing & Lithograph Co., Cincinnati, a corporation of Ohio). U.S. 2,828,008, March 25. A package which comprises a plurality of cylindrical objects of predetermined height and diameter and a carton surrounding and embracing said objects.

Reclosable Carton, Lloyd Kalman Brown (to National Paper Box Ltd., Vancouver, B.C., Canada, a corporation of British Columbia). U.S. 2,828,060, March 25. In a paperboard carton having a top, bottom and two sides, a flap connected to an edge of the top extending the length thereof and extending down over one of the carton sides.

End Closure for a Multi-Sided Carton, Hans Zerlin (to Jagenberg-Werke Akt.-Ges., Düsseldorf, Germany). U.S. 2,828,061, March 25. In a leakproof container of paper, paperboard or like carton-forming material, a body including side walls and a rim, a closure for at least one end of the body and a lining sheet.

Flexible-Material Package, Walter P. Taylor, Jr., New York. U.S. 2,828,092, March 25. A package of flexible material having an annular core space around which the material is wound in a body and an opening into such core space through the body of the package through which the inner free end of the material can be drawn out, said package being formed of a plurality of layers of coils each forming at least one figure 8.

Packaging Material, Robert de S. Couch et al (to General Foods Corp., White Plains, N.Y., a corporation of Delaware). U.S. 2,828,240, March 25. A process of making laminated packaging material highly resistant to the transfer of water vapor therethrough, which comprises juxtaposing two flat plies and pressing the plies together.

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are Plastofilm's new designs in transparent packaging, incorporating *Eye appeal, purpose* and *economy*

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division of CONTINENTAL CAN COMPANY

WHEELING, WEST VIRGINIA

Special films for fresh meats

[*Continued from page 108*]

ability. Water-vapor transmission of these materials, however, is somewhat greater than in conventional meat cellophanes.

Each of these materials costs 65 cents per pound and has a yield of 19,500 sq. in. per pound, the same as conventional moistureproof, heat-sealing cellophane.

One of these films, a new MSAD-80, developed by Du Pont after lengthy research, has been extensively tested over the past year. More than one million packages of meat wrapped in the film have been marketed, some in difficult marketing areas where spotty discoloration of meats had been reported. To date, Du Pont reports no complaints on discoloration of meats packaged in this new film.

The oxygen transmission of this material is rated at two-and-a-half times that of a 1-mil polyethylene film, a material known for its high transmission value. In addition, stores report that this cellophane reduces the need for re-wraps and has sufficient rigidity to handle easily and seal quickly without the problem of sticking to hotplates.

In a laboratory test conducted under adverse temperature conditions to test the bloom-preservation qualities of this cellophane, the new material and standard cellophane were each applied to 132 steaks. The result: after 24 hrs. storage, meat in the new film showed 74% less discoloration than that packed in regular meat-grade cellophane.

Another nitrocellulose-coated cellophane, called OF-16, has been produced after five years of development by the Olin Mathieson Chemical Corp. It shows similar protective properties, but unlike the other two, is intended for produce, processed meats, poultry and fresh fish, as well as fresh meats—a versatility that could enable it to replace three different cellophane films which are now being used to package these different products.

Biggest feature claimed for this material is its ability to absorb water vapor at four times the rate of conventional cellophane. Conventional films, company researchers declare, often bead and thus provide only spotty moisture distribution. The wettable surface provides much greater—and more even—transmission of oxygen to avoid localized discoloration on the meat.

Other advantages reported for this film are increased clarity, sparkle and slip properties.

Adhesives—an industry survey

[*Continued from page 101*]

melts is a specially adapted extruder which handles the adhesive in pellet or granular form.

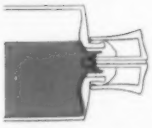
The application of thermoplastic coatings on paperboard cards to permit rapid, mechanized heat sealing of blister packs has been one of the big factors in the growth of thermoformed packaging.

Electronic sealing, too, is helping to increase speeds and to reduce floor-space requirements through the use of dielectric heat generation. This development particularly benefits manufacturers in the waxed carton and container field.

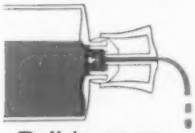
Modern adhesives are creating a whole new concept in package production through the use of thermoplastics as coatings and patterned printing that can impart heat-sealing properties to all manner of surfaces. The ultimate goal, of course, is to convert traditional gluing operations to sealing by reactivation methods, using heat, water or solvent in modern high-speed machine operations. This increases production, cuts overhead and saves labor costs and sizable amounts of floor space.

Like all industry today, adhesives manufacturers have felt the economic squeeze between rising costs and slightly lower demand. However, if past trends are any criterion of the future, business in this field should continue to grow in direct relation to the expected growth of packaging generally. The synthetics, already accounting for more than a fourth of the industry dollar volume, undoubtedly will continue in the lead. And since they command the better price, their increasing use will be an important factor in keeping the adhesives industry picture rosy.

Twin-Seal closure molded by L. T. Kinder Plastics Inc.



Push to close



Pull to open

Pull, it's open. Push, it's sealed. Never removed, never lost. This new squeeze bottle closure (an exclusive development of U.S. Cap & Closure Inc., Chicago) is molded from BAKELITE Brand Polyethylene to provide the smooth action, the close fit, and the low cost necessary for a successful design. Find out more about BAKELITE Brand Plastics. Call your supplier or write Dept. CY-105, Bakelite Company, Division of Union Carbide Corporation, 30 East 42nd Street, New York 17, N. Y.

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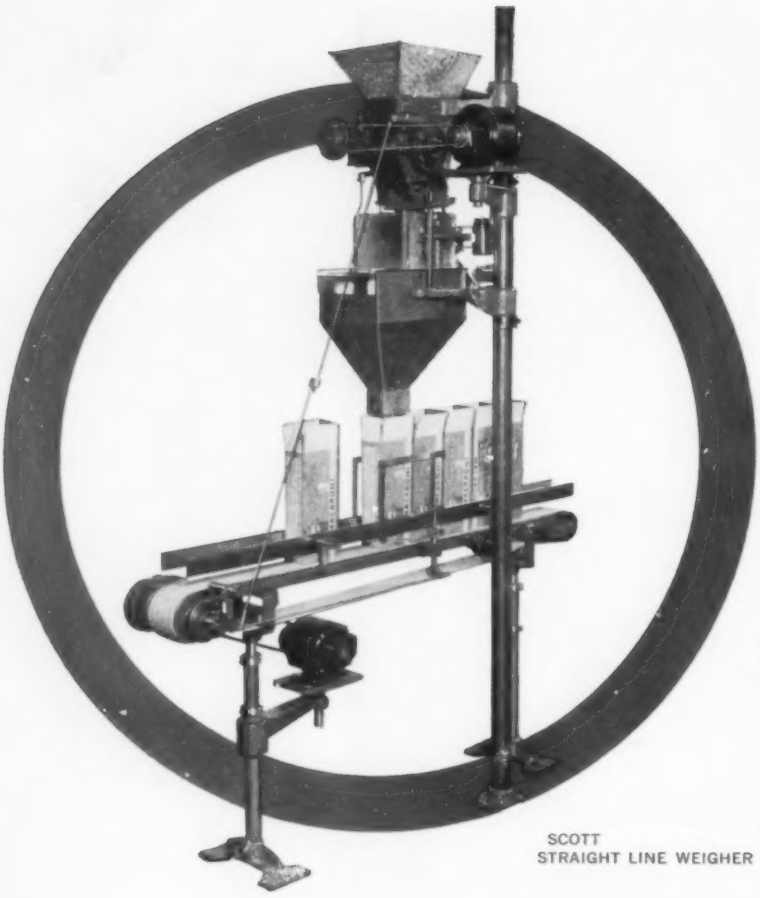

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Seventh Western show

About 125 companies, including national and Western packaging-supply firms, have signed up for exhibit space at the seventh Western Packaging & Materials Handling Exposition, to be held Aug. 11-13 in San Francisco's Civic Auditorium. The total number of exhibitors is expected to exceed 130, with attendance surpassing 15,000, according to Clapp & Poliak, sponsor and manager of the biennial show.

Advance reports indicate that much of the packaging machinery and materials to be on display at this year's show will reflect the trend toward faster production speeds, lower costs and greater compactness. Equipment designed to increase packaging automation will include: a machine for packaging products in polyethylene film that has a rated cycling speed of 3,000 per hour and can handle products in a wide range of sizes; a pushbutton-operated tape machine that dispenses pre-selected lengths of moistened paper tape; an electric dispenser and applicator for pressure-sensitive labels in roll form; a space-saving, operatorless case sealer said to seal any required combination of top and bottom flaps, and an adjustable, mobile wrapping machine incorporating a folding principle that reportedly produces a new package type of perfect symmetry.

Of special interest to produce packagers, say the show's sponsors, will be the large number of exhibits devoted to pre-packaging agricultural products of all kinds. These exhibits will include demonstrations of packaging machines for the rapid processing of non-standard shapes, as well as improved protective films that extend the effective life of packaged produce.

A new feature at the 1958 show will be a packaging and materials-handling clinic, sponsored by the Western Packaging Assn. The project was inaugurated to help packaging personnel keep abreast of rapidly changing industry conditions, says William H. Jaenicke, co-chairman of the show. To be held on Aug. 12, the question-and-answer session will be moderated by a panel of packaging and materials-handling authorities. It will be open to all show registrants.

Co-chairman of this year's show, along with Mr. Jaenicke, is K. O. Dean, publisher of *Good Packaging*

magazine. Both men also serve on its board of sponsors, comprised of 39 executives of Western suppliers of packaging materials and equipment and materials-handling companies.

The site of the Western show alternates every other year between Los Angeles and San Francisco.

Halofluorocarbon

[*Continued from page 136*]

The Kel-F heat-setting inks are designed for applications where the inked impression must withstand solvent or chemical attack. Color strength is unaffected by most oils, solvents, fuels and antiseptics.

Kel-F plastic packages can also be labeled by hot stamping directly on the plastic. Labels can be affixed with a pressure-sensitive adhesive, or the label can be inserted in the package and read through the plastic itself. The method of labeling will be governed by the requirements of the specific end use. Recent experience has shown that it is also possible to print on Kel-F plastic using conventional high-speed automatic marking equipment with readily available commercial inks.

Pharmaceutical advantages

It has been demonstrated by several pharmaceutical companies that the relatively high cost of Kel-F plastic does not make it uneconomical for use as a packaging material. Experience has shown that:

1. Novel packages impossible to attain with other materials may be fabricated with Kel-F plastic.

2. Economics in shipping and packaging with no breakage help to offset higher material cost.

3. Unit package cost may be kept low (1-3 cents) when thin-walled tubing or film is used.

Applications

With this general background information, we may now consider some specific examples of packaging applications of Kel-F plastic.

1. *Suture packaging.* Traditionally, glass tubes have been used to package catgut and silk suture materials. The glass package has an inherent breakage hazard, is difficult to open and is high in shipping and packaging cost. These objections are completely overcome with the use of transparent, heat-sealable

ANOTHER VERTROD FIRST!!!

- New, HIGH-SPEED Thermal Impulse TRIM-SEALER for Polyethylene with SCRAP BLOW-OFF and RECYCLER.
- Over 50 SEALS per minute.
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This newest and most advanced addition to the Vertrod line of Thermal Impulse Sealers is particularly suited for applications where HIGHEST SPEED bag closing is necessary and water-tight seals are not required.

The Vertrod HIGH-SPEED Thermal Impulse Sealers employ compressed air to close the jaws as well as to blow away the trimmed-off scrap.

These models are most suitable for packaging Textiles, Hosiery, Toys, etc. in Poly bags.

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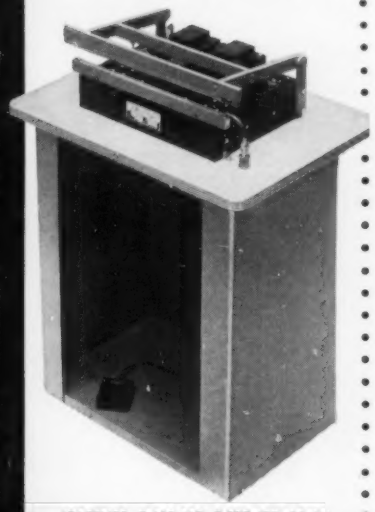

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a model for every purpose . . . a speed for every need!
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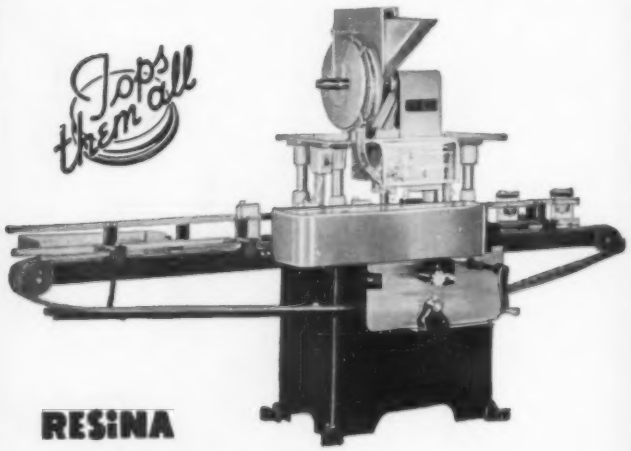
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Automatic innerseal machine for selecting and applying standard innerseals to various types and sizes of tin cans as commonly used in the oil industry.
Capacity: 60-120 per minute
Seals from ⅞" to 1½".
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tubing made from Kel-F plastic. Such plastic tubing may be radiation sterilized or steam sterilized without alteration of properties. The low permeability of Kel-F plastic allows the use of the conventional alcohol and formaldehyde antiseptic tubing and canning fluids.

2. *Parenteral-solution packaging.* Small ampoules made of Kel-F plastic provide an excellent unbreakable packaging medium for parenteral solutions. The ampoules are fabricated simply from extruded tubing. In use, the syringe needle is forced directly through the plastic into the liquid.

3. *Combination storage ampoule and hypodermic syringe* for single-shot applications. This package makes it practical to store sensitive pharmaceuticals for long periods in an ever-ready sterilized package with built-in hypodermic needle. Low water and oxygen permeability make this application possible.

4. *Plastic pouches.* Kel-F plastic films heat sealed into pouches find use in the packaging of corrosive materials and of substances sensitive to moisture or oxygen. Examples of the use of Kel-F plastic in this way are in the packaging of foods, antibiotics, germicidal rinses and water-purification tablets.

5. *Plastic bottles.* Four-ounce Boston round bottles with a screw top are produced by blow-molding techniques and have been used for specialized service for some time. Round-bottomed blow-molded containers are also available.

6. *Bottle-cap liners.* Recent development work has been done, and is continuing, on a molded Kel-F plastic bottle-cap liner. Such a liner has the virtues of being heat sterilizable, of being extremely resistant to corrosive bottle contents, of permitting virtually no water or oxygen permeation, of imparting no odor or flavor to the contents and of not detracting from the odor or flavor of the contents. It is expected this liner will be of interest to packagers of high-quality beverages.

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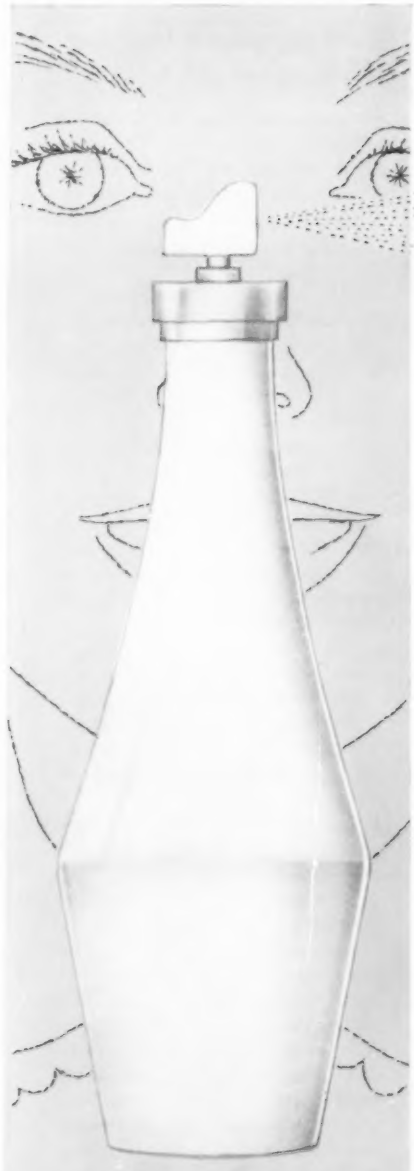
1. *Anon.*, "Enter Flurocarbon Film," Modern Packaging, *31*, 3, pp. 158-160, 241, 242 (Nov., 1957).

2. Nelson, Alvin I.; Hu, Kwoh H., and Steinberg, Marvin P., "Heat-Processible Food Films," Modern Packaging, *29*, 10, pp. 173-179, 248, 250, 251 (June, 1956).



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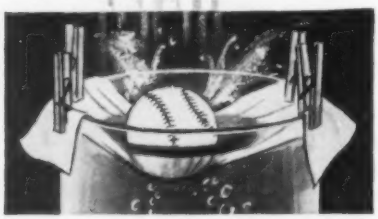

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Two-ply pouch forming

[*Continued from page 96*]

placing suction plates or expandable metal flexing plates with two plate-fitted arms that dip into the middle of each pouch and pull it open for filling with product.

Each filler dumps half a pouchful of product. The fillers have a vertical-blade product conditioner to help make the muffin mix homogeneous as it enters the pouches. Top sealing of the pouch is accomplished with the successive pre-heat, heat and cooling bars.

As pouches come off both halves of the line, a vacuum pick-off arm transfers pouches from one half directly to a bucket conveyor and from the second half to an inclined conveyor. Each of the buckets carries two filled pouches to an automatic cartoning station.

The filled and sealed cartons, with General Mills' patented tear-strip opening device, travel past a check weigher and metal detector. These checking devices are standard in-line quality-control equipment at General Mills.

The output of these muffin-mix packaging lines is fed into a common semi-automatic case sealer that packs a dozen 14-oz. cartons in each corrugated shipper.

On one of the packaging lines the company is currently using an automatic pouch check weigher. Just before the pouch is transferred to the bucket conveyor, it is placed in a weighing cradle. The check weigher incorporates both automatic and visual rejection mechanisms if pouches exceed underweight or overweight limits. Operators can observe a green or red light that flashes to indicate acceptable or unacceptable pouches. The company normally adjusts the mechanical controls of the unit to reject only out-of-limits underweight pouches.

Later modification of the check weigher and additional electronic controls are expected to permit the check weigher to readjust the fillers automatically to compensate for improper weights while the production line is in operation.

General Mills now uses the new two-ply pouches only for Betty Crocker Muffin Mixes. Its success for the muffin-mix pouches may lead the company to adopt the technique for other products.

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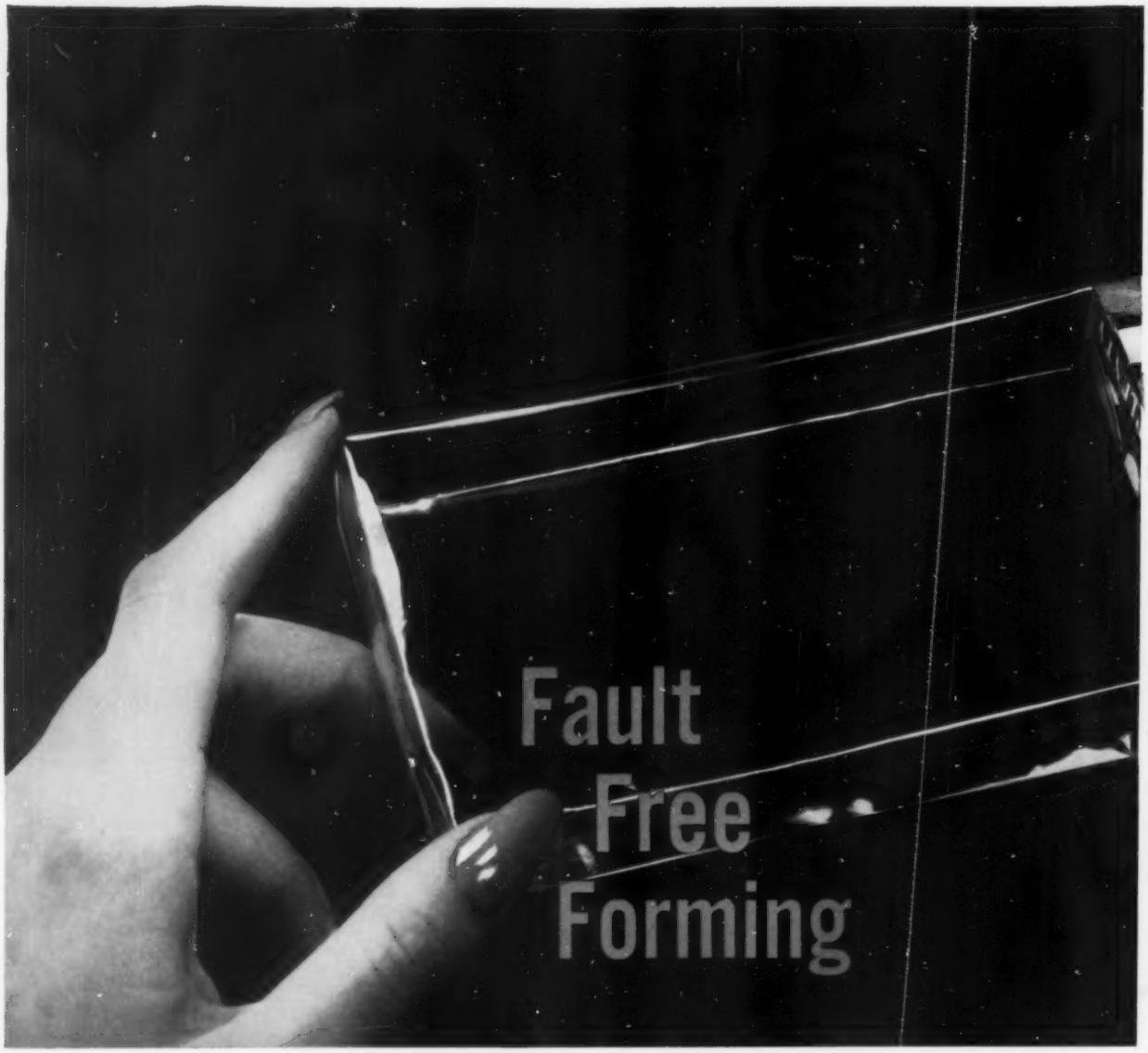

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Uniform, gusseted, flawless bags of Avisco cellophane are made by Milprint, Inc., Paramount Packaging Corp., and Boyertown Packaging Service Corp. for San Giorgio Noodles.

High speed machines at Regina Cigar Co. wrap Havana Palmas in Avisco cellophane. The gusset fold is simple because of cellophane's body. Packages feature a cellophane tear strip.

Even at machine gun speeds, Avisco cellophane forms perfectly on packaging machines. The flavor-retaining overwrap of Beeman's Gum is an example. Printed by Forbes Lithograph Co.

GOOD and PLENTY
LICORICE flavored CANDY
"Avisco cellophane operates at 98% efficiency on our machines that package Good and Plenty," says Mr. Lester Rosskam, Jr., Vice-President of Quaker City Chocolate and Confectionery Co., Inc. "Cellophane is also an essential part of our quality control program because its moistureproofness keeps the candy fresh."

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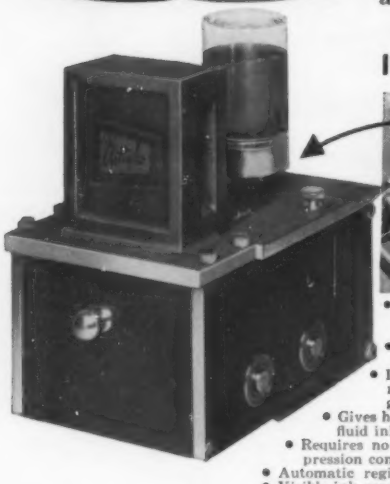
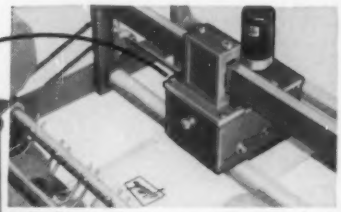
automatic wrapping machine

CODE-DATING and IMPRINTING ATTACHMENT





- Easily attached to any wrapping, bundling, bag-making machine. Compact — weighs less than 5 lbs.
- Functionally designed for trouble-free operation.
- Imprints code-dates, descriptive copy, trademarks on paper, cellophane, polyethylene, glassine, foil, etc.
- Gives high quality printing results with fast-drying fluid inks.
- Requires no adjusting at any time — has integral impression control.
- Automatic registration of imprints in any desired location.
- Visible ink supply with automatic feed.

Write today for full details about the new "Series 700 Rolaprinter" attachment

First and foremost in automatic production-line CODING, MARKING and IMPRINTING machines

Gottscho

GOTTSCHO, Dept. A
HILLSIDE 5, N. J.

In Canada: Richardson Agencies, Ltd.
Toronto and Montreal

on any PACKAGING MACHINE there is a place where IMS SILICONE FLUID SPRAY

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Anywhere Any Packaging Material Tends to Stick . .

IMS SILICONE SPRAY will cut your scrap and stoppage rate—Save You Money! Try it on your packaging line—you'll see why almost overnight this amazing anti-stick material has become a necessity in the modern high-speed packaging field!

PRICES: $ 2.00 Per Sample Can
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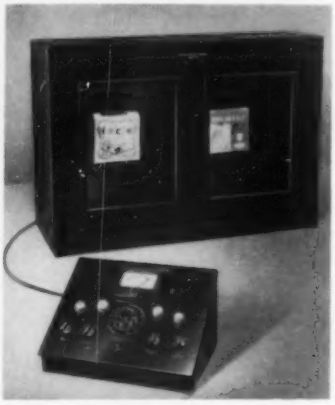
Still lower prices on larger orders shipped in one gross lots on any schedule you request.

New testing device

A new electronic device for scientifically determining and comparing the legibility of packages has been developed by R. E. Van Rosen Corp., New York. Called the "Videometric Comparator," this testing apparatus



determines the clarity of the package's merchandising message and gives the exact legibility differential between old and new package designs on a numerical scale. One or two packages are placed in the test unit, behind a screen of specially treated material. By electronic means, the operator controls the opacity of the screen. As the screen becomes gradually transparent, one can read first the most prominent line on the package, then other features in order of their legibility.

Visitors at the recent Packaging Show were invited to evaluate their packages on the new instrument, displayed in Milprint's booth.

High-density—

[*Continued from page 93*]

ping costs vary widely according to plant location, type of transportation and product. On the basis of an approximate figure of 2.5 cents per pound for trucking costs, Breck saves about 15 cents per dozen in shipping charges on the plastic bottles and 12.5 cents per case on the jars. Rail-car savings are more obscure, since a flat rate is charged for the car, plus a surcharge for weights above a certain amount—and both of these rates are different for glass and plastic.

Additional savings in shipping costs have been achieved because the non-breakable character of the plastic bottles has enabled the com-

pany to lighten the weight of unit cartons and shipping cases. These savings cannot be realized on the jars, however, because of the foil-laminated folding carton, which requires as much protection to prevent scuffing as a glass jar did to prevent breakage.

Neither of the plastic packages presents significant production problems. Both reportedly run well on standard filling, closing and casing equipment. The bottle is pre-printed by a new, economical, three-color, off-set technique that enables the company to retain its traditional red, black and gold label at about half the cost of a comparable silk-screen job. Difficulties were encountered, however, in silk-screening the jar, leading to the adoption of acetate-laminated-paper spot labels. Breck has had no problem of adhesion in this operation, because of its previous experience with polyethylene and because the jars are specially heat treated by the supplier for labeling.

New fertilizer carton

An improved package for merchandising fertilizer, adopted by the Diamond Fertilizer Co., Sandusky, O., is this siftproof, full-overlap-flap,

die-cut corrugated carry carton with built-in pour spout. Sealing of the carton, which has no two top flaps that are exactly alike, is accomplished on a new automatic carton maker that can be handled by one operator only.

As the first operation, the knocked-down carton is slipped over a dummy frame and advanced into the machine. One long panel full flap is then folded over and glue is applied

Service comes in

WS TUBES

Wheeling Stamping gives you the kind of service you would expect from *a department of your own business.* We specialize in tubes and caps—make nothing else. We're small enough to treat your requirements personally, big enough to provide all the capacity you can use. When WS is your tube supplier, you can count on having tubes *where* you want them, *when* you want them—delivered right to your door *by motor freight,* delivered according *to your production schedule.*

PLASTIC CAPS and FITMENTS
WS gives you the same kind of custom-tailored service on hard and soft plastic caps, tips, sifter tops, eye cups, rings and special fitments.

WHEELING STAMPING CO.
WHEELING W. VA.
WS CO

The Modern Tray-

for the Frozen Food Package!

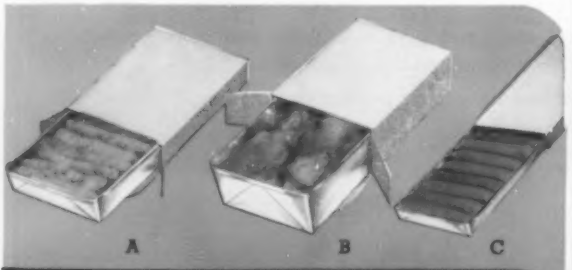
Straight sided rigid foil pans or trays permit full package so compact that they are profitable items to handle in retail stores. The full package pleases the housewife and builds repeat sales. "American" straight sided trays permit packages that save counter space, freezer capacity, trucking space and general storage space and stack neatly . . . . All money saving features!

They handle easily on your automatic conveyers, filling machines, wrapping machines, etc.

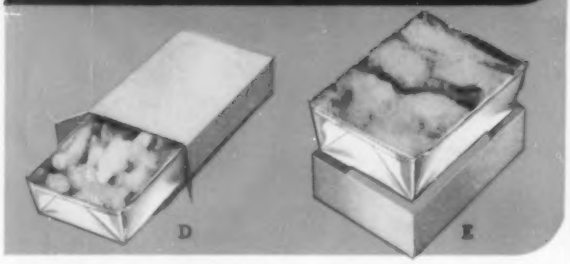
Let us he'p you develop the best package for your product. We can easily fit your present package or a new design.

SIZES ⅛" to 1¾" deep and from 3½" x 3½" to 11" x 11", all without die cost to you.

WRITE US FOR COMPLETE INFORMATION



American foil pans or trays are perfect for use in any form of carton or type of wrapping.

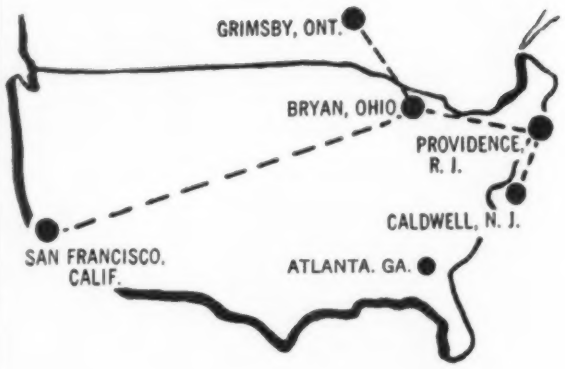


A. Shallow trays slip easily into carton and fit snugly.
B. Deep pan for candied yams or any product with sauce.
C. Rigid pan in sleeve and over wrapped makes excellent package.
D. American straight sided pan makes beautiful package in printed or labeled carton.
E. Strong beaded pan in cardboard ring, tightly over wrapped, makes rugged visual package.

- *Leak Proof*
- *Rigid Bead*
- *Smooth Straight Side*
- *No Sharp Corners*

AMERICAN

THE AMERICAN PAN DIVISION
of THE AMERICAN TOOL WORKS COMPANY
720 E. PEARL ST. CINCINNATI 2, OHIO



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6

6 convenient spots for obtaining refrigerated unvulcanized rubber IN A HURRY

Atlanta, Ga., is the newest refrigerated stocking plant of our distributor, Williamson & Co. For temperature-controlled rubber, call them there or in Caldwell, N. J., ·Bryan, Ohio, ·San Francisco, Calif., ·Grimsby, Ontario, or contact our Providence, R. I., plant.

US RUBBER

Mechanical Goods Division
United States Rubber

to all required areas, skipping the surface on which the carry handle will lie. Next, the small end-panel flap and the long end-panel flap (with one section of the double-thickness carry handle die cut into its surface) are folded over. The carton is then automatically transferred crosswise in the machine, where the remaining long panel full flap (containing the second half of the die-cut carry handle) is glued and folded.

After the folding and gluing operations have been completed, the carton is discharged on to the work table adjacent the starting point. The operator then rolls the dummy frame crosswise on the roller table and sets another carton in position to start a new cycle.

SUPPLIES AND SERVICES: *Carton by Hinde & Dauch Paper Co., Sandusky, O. "One-Man Carton Maker" by General Corrugated Machinery Co., Palisades Park, N.J.*

Visibility plus

[*Continued from page 119*]

sales. Its old package, according to a company spokesman, was good for its day, but could be made better. This was a folding box in which a coiled belt was similarly covered with a transparent polystyrene top. But this "crystal-top package" was squat and had rounded corners on the bottom and a curved plastic top. The carton was printed in olive and yellow. And a special paperboard insert to prevent the belt buckle from cracking the polystyrene lid had to be removed by the salesman before displaying the package.

Revising this basic packaging idea according to retailer preferences was the first step taken by Paris. The construction that evolved is a rectangular Brightwood-type folding carton made in two sizes. Both styles have the same outer dimensions, but a formed channel inside the box is either wide or narrow to accommodate one belt width or the other. The new rectangular transparent polystyrene cover is extra thick along one end of the top to withstand buckle impact. This plastic cover is used for both box sizes, since it fits standard outside dimensions.

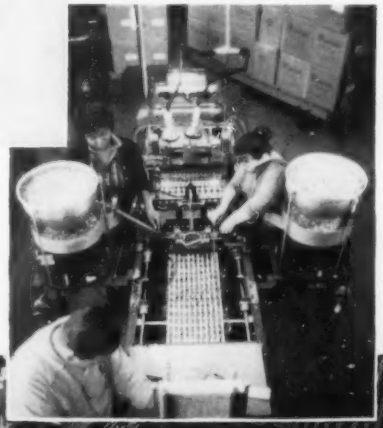
The carton is deep enough to accommodate a coiled leather belt and the clear "Vista-Dome" top shows more of the belt than in ordinary

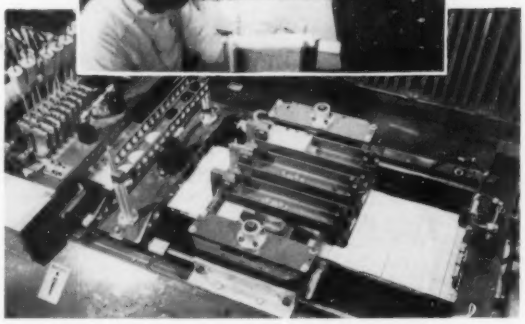
The accepted adhesive

for "blister" packaging

PROXSEAL®

Proxseal thermoplastic adhesive plays a vital part in the "blister" packaging of G. E. flashlight bulbs. The completed package has two strips of stock with five bulbs mounted on each—easily separated by tear tape for display.





This photo (right) shows how G. E. flashlight bulbs are introduced into a vacuum formed web of Celanese acetate. The lower photo shows the final steps in this continuous unit—sealing the packaged bulbs to imprinted board from the Nevins Company, which has been coated with Proxseal. The result—a snug and functional package, completely protecting – as well as displaying – each individual G. E. flashlight bulb.

Credits to
General Electric Co.
Celanese Corp.
The Nevins Company
Packaging Industries, Ltd.

Write or phone for information on how we can help solve your own heat sealing problems.

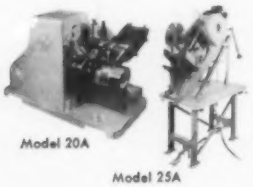
Pyroxylin PRODUCTS, INC.

CHICAGO 32 Virginia 7-4800

PAOLI, PENNA. PAOLI 4141

Get better looking, lower cost package identification and decoration with a MARKEM METHOD

Hand stamping, using decals, stenciling — such methods can not only reduce the attractiveness and sales appeal of your package, but consume valuable time as well. "Outside printing" requires large inventories . . . causes waste from obsolescence . . . can result in production delays as well. The time and money saving way around these obstacles — with added quality besides — is a Markem Method working in your plant. This is a combination of the right *machine, type* and *specialty ink* to *identify* or *decorate your packages* at the *rate you need, as you need them.* Whether you want to screen decorate designs on molded plastics . . . print pressure sensitive tape with product name, trademark and directions for use . . . imprint variables on bakery labels, set-up or flat folding boxes, lithographed cans or lids — there's Markem equipment and a proven method for the job. The two machines shown are typical of more than a dozen used in the packaging field; type-wheels, or masterplates and typebars, make imprint changes fast, easy; 10,000 currently available specialty inks offer virtually any combination of color, drying speed and special property you want. In many cases, Unitized Markem printing heads can be combined with packaging equipment.



Model 20A

Model 25A

Ask Markem for specific recommendations to meet *your* identification and decoration marking needs. Nearly 50 years of experience — in all industries — and a single source for the *whole* answer, stand behind every Markem quote. Write Markem Machine Co., Keene 1, New Hampshire.

MARKEM

EVERYTHING INDUSTRY NEEDS . . . FOR PROFITABLE MARKING . . . SINCE 1911

belt cartons. The belt itself is held in its coiled shape by a gold-colored, foil-laminated paperboard band that has a price and size tag, removable for gift purchases by tearing along a perforation. Customers can easily remove the lid, pull out the coiled belt, inspect it at first hand and replace it in the carton before deciding on a purchase.

But creating a belt package that would satisfy the retailer was only half the packaging story. It also would have to have impulse appeal to the customer. The company was convinced the new box enhanced the quality reputation of Paris brand belts, but it sought substantiating market data.

A design was created for the box construction that was subjected to several consumer-preference tests by a market-research organization. As in the final package, an over-all white was used with a red diagonal stripe running around the box and the Paris trademark and slogan, "'Tops' for your trousers," printed on side panels.

In testing, belts of the same quality were put in several different packages. A consumer panel favored the dome-packaged belt as the superior product. A single package on a counter or several packages in a display were found to rate higher than did competitive packages.

Armed with this information, Paris laid plans for promoting its new package. To conform with the new box design, the company revised its paperboard-and-acetate sleeve for elastic and fabric belts. The sleeves also are predominantly white—which helps emphasize the color in these belts—and printed with a similar red diagonal stripe and logotype.

A special display stand was built for the new package, although the rectangular box will fit nearly any Paris display. To promote the dome-cover theme of the new packages, the company carries off the Vista-Dome railroad-car connotation by providing retailers with a huge semaphore display stand and "trains" of belts in their new domed boxes.

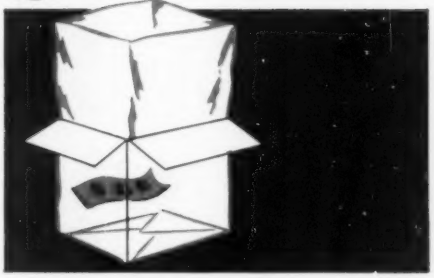
Although the packaging cost may be higher than for some other belt packages, the company feels that it is demonstrating superior selling and merchandising power in the $1.50 to $10.95 price range in which the Paris brand competes.

you can **see** savings in every package

with K-flex® custom-tailored package liners

- SAVE on initial cost. No more expensive metal, glass or fibre containers.
- SAVE on shipping costs. Less volume, less weight means lower freight bills.
- SAVE on storage. Space requirements reduced to a fraction.
- SAVE on labor. No returns, no deposits, no washing and sterilizing.

K-flex Liners can be pre-formed to fit any shape and any size container . . . from materials to meet your specific requirements. If your products are liquid, semi-liquid or dry, Kuss can show YOU how to enjoy these savings.



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R. L. KUSS & COMPANY, INC. • FINDLAY, OHIO

Lithography on Aluminum Foil

- *Sparkling* packaging and promotional material in full or flat colors.
- Short and medium length **production** runs by versatile offset lithography.
- **Metallic stock** available in wide range of colors, finishes and weights.
- Call or write for samples.

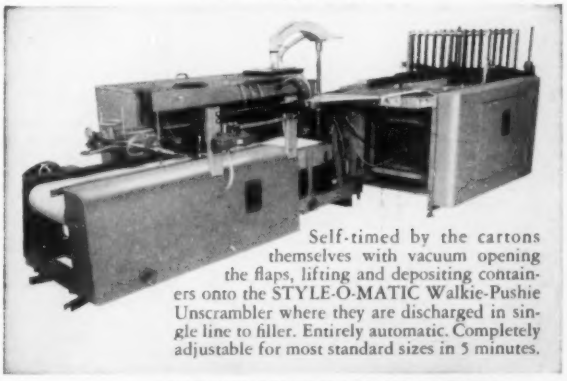
Laurel Process Company, Inc.

601 WEST 26th STREET • NEW YORK 1, N. Y. • TELEPHONE WATKINS 4-5600

NEW! High Speed

AUTOMATIC GLASS UNLOADER & UNSCRAMBLER

Patents Applied For



Self-timed by the cartons themselves with vacuum opening the flaps, lifting and depositing containers onto the STYLE-O-MATIC Walkie-Pushie Unscrambler where they are discharged in single line to filler. Entirely automatic. Completely adjustable for most standard sizes in 5 minutes.

FREE!

MAIL THIS COUPON FOR FULL DETAILS

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Sounds interesting. Send me full details on your GLASS UNLOADER & UNSCRAMBLER.

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NAME.....

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Machinery and Equipment For Sale

FOR SALE—HAYSSEN OVERWRAP MACHINE, recently reconditioned. Model 7-11. Serial No. 9301. $1700.00. Holiday Ice Cream Company, 2125 Reading Road, Cincinnati 2, Ohio.

FOR SALE—TABER SINGLE-EDGE BEADER and dies: 30" folder; Harco 24" Folder. Also other equipment for manufacture of patented transparent container. Patent available on a royalty basis. Write: Mr. A. J. Malley, 623 East Genesee Street, Syracuse, New York. Phone: GRanite 5-1643.

FOR SALE—SIMPLEX BAG MACHINE, Model 4-7 complete with electric eye, perforators and stacker. Also Industrial Tape Slitting Machine, Model B. Reply Box 888, Modern Packaging.

FOR SALE—MERCURY VLS 12, Automatic, Jaw Type Heat Sealer & Labeller, with cabinet housing vacuum motor, Teflon covering, counter mechanism attached, factory reconditioned, spare jaws, new thermostat, and other parts, included. Excellent condition. Four years old. Reply Box 886, Modern Packaging.

FOR SALE—ONE UNION SPECIAL 100-pound bag sewing machine, Style 80600E, in excellent condition. $325.00. Willson Dairy Company, 2125 Reading Road, Cincinnati 2, Ohio.

FOR SALE— CARTONER MACHINE CECO MODEL 40 (Container Equipment Corp.) 9½ GG 2 Station Adjustable. Glue seals a dry seal, end style carton. Brand-new condition, less than 1 year use. Direct inquiries to Litho Division, Milprint, Inc., Milwaukee, Wis.

FOR SALE—1—65" SEYBOLD CUTTER (mill type) 10-Z-10212 with side plate tables and automatic stoppers . . . $9,500.00. 1—39" Seybold cutter (old style) . . . $750.00. Immediate delivery. Reply Box 896, Modern Packaging.

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FOR SALE—LETTERPRESS PRINTING PRESS (oil ink) four and six color kidder, roll to sheet fed. Excellent condition. Adaptable for printing cellophane, foil, polyethylene, acetate and all grades of paper. Reply Box 895, Modern Packaging.

FOR SALE—ECH SPECIAL—Ferguson top & bottom shipping carton sealer with 3 HP Exp. proof motor and 8½ Ft. compression belt. with ½HP AC motor. Excellent condition. Priced at $2500. Immediate Delivery—Equipment Clearing House, Inc., 111 33rd St., Brooklyn 32, N.Y. SOuth 8-4451—4452—8782.

MOST MODERN PACKAGING AND FOOD PROCESSING MACHINERY—At Wonderfully Low Prices. 3—Hayssen Model F Compaks with net weight scales, bulk and dribble feeds, electric eyes. Installed new in 1955. 2—Package Machinery Model C Transwraps, with net weight scales, bulk and dribble feeds, electric eyes. Installed new in 1955. Stokes & Smith Model BS Stokeswrap, auger feed, electric eyes. 8—Scandia Model SFS6F High Speed Automatic Wrappers with electric eyes. 1—Ceco Model 40-9½ TT Automatic Adjustable Cartoning Machine. Hayssen Wrappers, all sizes. Package Machinery Models FA, FA2, and FA4 Wrappers with and without electric eyes. 1—FA2 Wrapper complete with electric eye and tear tape unit. In like-new condition, used for samples only. 1—FA4 Wrapper. In like-new condition, used for samples only. 3—Package Machinery Model PA (Palmer) Machines—several with rotary feeds. Wrap King Model DW2 Wrappers with or without cardboard feed and labeling attachments. 1—Pneumatic Scale Automatic Carton Feeder, bottom sealer and top sealing units with interconnecting conveyors. 3—Ceco Model A3901-12 Cartoning Machines with compression unit. Amsco, Doughboy, Fry and Pack Rite Bag Sealers. Fillers, mixers, grinders and processing equipment. Complete details and prices available on request. UNION STANDARD EQUIPMENT COMPANY, 318 Lafayette Street, New York 12, N.Y. Phone: Canal 6-5334.

Machinery Wanted

WANTED—LAMINATING or combination laminator-embossing machine capable of handling 60 to 70 inch widths of lightweight flexible plastic films. Must be in good condition, no more than 7 to 10 years old. Reply Box 892, Modern Packaging.

Materials For Sale

FOR SALE—POLYETHYLENE DRUMS—Spot lot of approximately four hundred 15-gallon, used polyethylene drums in steel. Good condition. On "as is—where is" basis. Original product discontinued from manufacturing. New container cost $14.00 each. Will sell for $5.00 each. All containers ICC approved for domestic or export shipment. Reply Box 898, Modern Packaging.

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WANTED—POLYETHYLENE EXTRUSION-LAMINATION SUPERVISOR. Nationally known manufacturer packaging materials needs thoroughly experienced supervisor polyethylene extrusion-laminating department. Career for man who can take complete charge production and supervise others. Main requirements: At least 5 years' supervisory experience with thorough knowledge machines and materials and proven ability to produce top quality product. This is opportunity to associate with leading organization in the packaging field. Growth and personal advancement based on performance. Liberal pension benefits. Our employees are aware of this advertisement. Write in strictest confidence all details background, education, experience to Box 881, Modern Packaging.

FLEXIBLE PACKAGING REPRESENTATIVES AND SALESMEN WANTED—Opportunity to join leading New York printer—converter of polethylene and other flexible films on salary and/or commission basis. Prefer men with sales experience in flexible packaging. Michigan, Ohio, Western Pennsylvania, Georgia, Tennessee, and North Carolina residents preferred. Other territories available. Give details and experience. Replies held confidential. Write—Sales Manager, Flexicraft Industries, Inc., 1323 Randall Ave., New York 59, N. Y.

WESTERN SPECIALTY PACKAGING SALESMAN—Leading packaging material manufacturer with national sales force, operating several plants—including West Coast—has opening for top-level specialty salesman in California. Experience with rotogravure, letterpress, flexographic and lithography helpful. Contact with food industry desirable. Excellent career opportunity with liberal pension and other benefits. Our employees know of this advertisement. Do not waste our time or yours unless you have successful selling record. Write details of education, experience, and present earnings in strict confidence to Box 885, Modern Packaging.

SALESMAN—A new position selling flexible packaging materials including film, foil, laminations and labels. Acceptable applicant must have high school education (college preferred) and a minimum 3 years selling experience in the flexible packaging field Headquarters will be either in Dallas or Forth Worth, covering Texas and Oklahoma. If interested in joining an expanding, progressive, nationwide packaging company, submit your detailed resume to: Box 894, Modern Packaging.

POLYETHYLENE—EXTRUDER-LAMINATOR

Will purchase for cash top quality polyethylene extruder-laminator. Must be in excellent operating condition, 54" to 74" width, with all necessary parts and supplies. Send full details including price, hourly capacity, and pictures if available, to Box 882, Modern Packaging.

RESEARCH & DEVELOPMENT—CONTAINERS—Top position for packaging development engineer in new, expanding Research and Development department of progressive mid-south division of national corporation. Experience in corrugated containers as packaging engineer or development engineer essential. Unusual opportunity to perform coordinated development on paper mill, converting and customer levels. Salary commensurate with ability and experience. Send resume with complete details on experience, education. All replies confidential. Reply Box 884, Modern Packaging.

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(*Continued on page* 192)

"TELL-ALL" PACKAGING! Thilco Specialty Bags prove the most simplified, convenient, low cost means for packaging Bon-Dee metal sink frames. Practical in more ways than one, because there is ample space for installation instructions and sales copy where you want it—on the *package that carries the product!*

ALL IN ONE! This manufacturer precautions against loss of separate instruction sheets. Complete details for mounting this bicycle basket are imprinted right on the face of the parts bag and a good selling point is the picture showing how easily the job is done — A bag package that combines functional purpose with service and advertising value.

FUNCTION AND ECONOMY COMBINED! A producer of window units found that packaging the hardware parts in cartons was all too costly. Thilco created a low cost, tough and durable Specialty bag that not only safely packages the parts but also features detail drawings and assembly instructions. Costly, separate instruction sheets were eliminated entirely.

THESE THILCO FUNCTIONAL BAGS SOLVE TOUGH PACKAGING PROBLEMS

. . . save users thousands of dollars in costly packaging and sales literature!

There's a big swing to Thilco SPECIALTY Bags in packaging and it's easy to understand. As these typical examples testify, Thilco Bags serve multiple functions with resultant effective economies.

Thilco Specialty Bags are almost unlimited in packaging scope. EFFICIENT . . . they simplify many packaging operations — require less storage space than other type containers — and also simplify inventory control in unit packaging. VERSATILE . . . they are available in numerous paper grades and duplex combinations to meet most any functional requirement. PRACTICAL and ECONOMICAL . . . they combine product with allied literature into one package unit at a minimum of extra cost.

Investigate Thilco SPECIALTY Bags today. More than likely their wide range packaging possibilities will amaze you.

Write for Free Samples and Specifications Kit

PACKAGES ONE PRODUCT—SELLS OTHERS! The manufacturer of Penthouse products packages a large, closet garment bag in this Thilco Specialty bag. Complete instructions for product assembly are imprinted on the face of the bag and the remaining space utilized for advertising other allied products in the line.

THILCO *FUNCTIONAL PAPERS*

THILMANY PULP & PAPER COMPANY • KAUKAUNA, WIS.

OFFICES IN: NEW YORK • CHICAGO • DETROIT • CINCINNATI

(*Continued from page* 190)

SALESMEN WANTED—We have two openings in our sales force. 1—Metropolitan, N. Y. C. 2—North and South Carolina. We are printers and converters of polyethylene and cellophane, specializing in side weld bags. Salary plus commission. Salary commensurate with amount of experience. All replies in strictest confidence. Address inquiries to Mr. Edward Miller, Clearprint, Incorporated, 3639 Dyre Avenue, New York 66, N. Y.

Situation Wanted

MECHANICAL ENGINEER—History of successful machines and product development. Experienced in designing, building and debuging paper, foil, polyethylene. Prefer New York or Long Island area. Reply Box 893, Modern Packaging.

15 YEARS EXPERIENCE in sales, sales training and sales management in varied fields. Have worked with wholesalers, industrial users and retailers. Definite record of accomplishment in creative and specialty selling. Earnings consistently above average and presently employed with too many limitations. Prefer Southwest area. Reply Box 889, Modern Packaging.

ASSISTANT TO PRESIDENT—Thoroughly versed in packaging material field. Production, marketing, product development. Past thirteen years directing all operations of flexible packaging converting organization. Presently employed. Capable coordinator, initiative, ability to get things done. Reply Box 897, Modern Packaging.

PACKAGING EXECUTIVE—12 years administrative and executive experience, principally national flexible packaging company. Proven record, ability and achievement. Heavy on sales administration. Thorough knowledge printing and packaging materials. Conversant with various markets and competitive conditions in industry. Desire position or association in packaging or related field. Location secondary. Reply Box 890, Modern Packaging.

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WANTED—POLYETHYLENE EXTRUSION BUSINESS. AAA-1 nationally known manufacturer packaging products wants to purchase established polyethylene extrusion-laminating business. Interested in first-class equipment and have openings for qualified production personnel at all levels. Can absorb total assets or polyethylene equipment and personnel only, as preferred. Variety of payment possibilities available to seller's advantage. Submit full details, with detailed specifications of equipment and personal history resume of personnel available in strictest confidence to Box 883, Modern Packaging. Personal discussions arranged with principals on short notice.

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TRANSFER LABELING. 4-page folder describes and contains sample of company's "Therimage" label paper whose printed surface, through application of heat and pressure, can be transferred from the paper to packaging materials. Method of applying the transfers by machine is also described. Dennison Manufacturing Co. **(F-857)**

PREPACKAGING SWEATERS. Consumer attitudes toward sweater prepackaging are summarized in a 12-page report based on a buying habit and preference study of 3,000 purchasers. E. I. du Pont de Nemours & Co. **(F-883)**

FORMABLE THERMOPLASTIC SHEET. Catalog file describes line of styrene, cellulose acetate, cellulose butyrate, and polyethylene sheet and film materials for skin and blister packaging. Price lists included. Campco Div., Chicago Molded Products Corp. **(F-860)**

Any of the booklets described here, plus many others—forty-four in all—are available for the asking, without charge or obligation.

Just turn to the Manufacturers' Literature Section in this issue (pages 161, 162), circle the numbers corresponding to the booklets you want, fill in the reply postcard, and mail. No postage needed.

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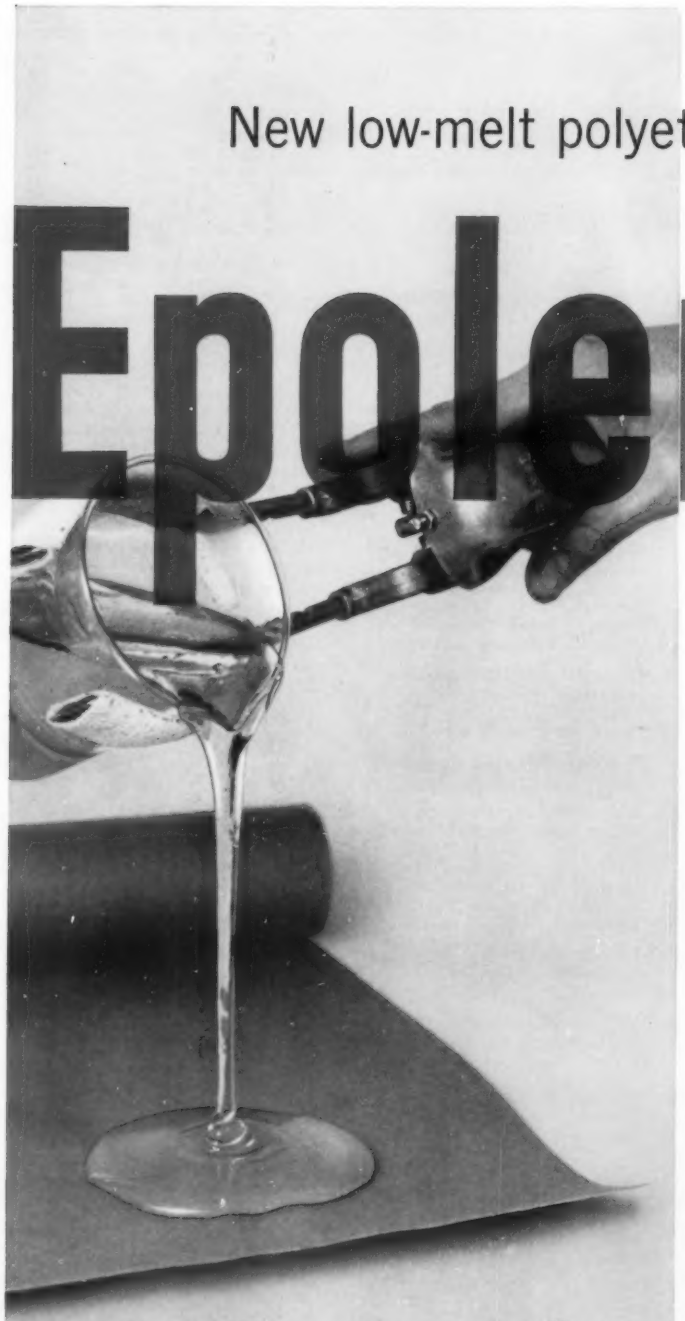
New low-melt polyethylene...

Epolene C



Epolene C

EASTMAN LOW-MELT POLYETHYLENE

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tenn.; New York City; Framingham, Mass.; Cincinnati; Cleveland; Chicago; St. Louis; Houston. **West Coast: Wilson Meyer Co.,** San Francisco; Los Angeles; Portland; Salt Lake City; Seattle.

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Flexibility, strength and chemical inertness have made polyethylene-coated papers increasingly popular. The more economical coating procedure now possible with Epolene C promises to extend the use of polyethylene-coated papers to many new fields.

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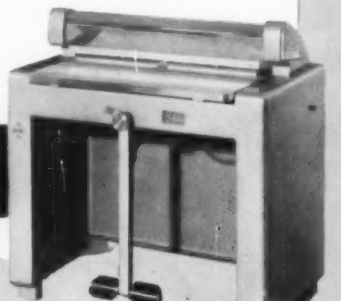

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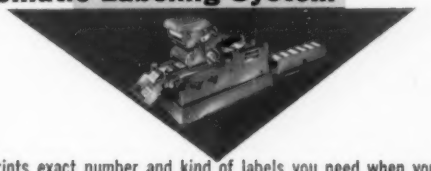

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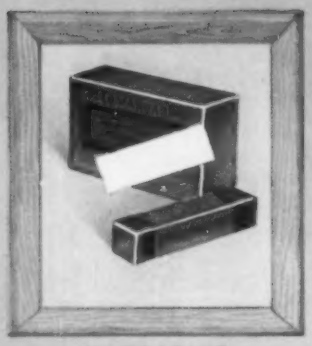

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